



An  
Bord  
Pleanála

## Inspector's Addendum Report

**ABP-312131-21**

### Development

Greater Dublin Drainage Project

### Location

Dublin City and Dublin County

### Applicant

Uisce Éireann (formerly known as Irish Water)

### Planning Authorities

Fingal County Council and Dublin City Council

### Prescribed Bodies (post 2022)

Commission for Railway Regulation

Development Applications Unit

Dublin Airport Authority

EPA

Fingal County Council

HSE

Iarnrod Éireann

Irish Aviation Authority

Meath County Council

NTA

South Dublin County Council

TII

**Observers (post 2022)**

Sabrina Joyce Kemper  
Vivienne Burch & Others  
Catherine McMahon  
Chambers Ireland  
Denise Mitchell TD & others  
Anne Murphy  
Maria Murphy  
Terri Gray & Paul Burke  
Portmarnock Beach Committee  
Eamonn Hart  
Sean Haughey TD  
Sean Lyons  
Bernadette Walsh  
Barbara & Niall Connolly  
Elaine Murray  
IBEC  
Peter Sweetman (Wild Ireland  
Defence CLG)  
Samantha Brown  
Sean Lyons  
Sports Ireland

**Type of Application**

Application under the provision of S37  
of the Planning and Development Act,  
2000, as amended

**Date of Site Inspection**

11<sup>th</sup> May 2025

**Inspector**

Alaine Clarke

## Contents

1.0 Background .....	6
2.0 Site Location and Description .....	9
3.0 Proposed Development .....	11
4.0 Submissions .....	22
5.0 Applicant's Response to Submissions .....	36
6.0 Oral Hearing .....	43
7.0 Planning History.....	43
8.0 Legislative and Policy Context .....	45
8.1. Introduction .....	45
8.2. European Policy Context .....	46
8.3. National Policy Context .....	47
8.4. Local Policy – Development Plans.....	52
8.5. Local Area Plans.....	59
8.6. Fingal County Council Climate Action Plan 2024 – 2029.....	60
8.7. Fingal Biodiversity Action Plan (BAP) 2023 -2030 .....	60
8.8. Natural Heritage Designations .....	60
9.0 Planning Assessment .....	61
9.1. Introduction .....	61
9.2. Overarching Planning Policy .....	62
9.3. Need and Capacity of the Proposed Development .....	66
9.4. Zoning Policy .....	68
9.5. Ecological Buffer Zones .....	83
9.6. Quiet zone.....	84

9.7.	Nature Development Areas (NDA's)	85
9.8.	Safeguarding Dublin Airport	86
9.9.	Site Layout	87
9.10.	Marine Water Quality, Combined Approach Assessment and WFD Assessment	88
9.11.	Roads, Traffic & Infrastructure	95
9.12.	Flood Risk	98
9.13.	The Board's Climate Duties	101
10.0	Environmental Impact Assessment	104
10.1.	Statutory Provisions	104
10.2.	EIAR Addendum	104
10.3.	EIA Structure	105
10.4.	Issues raised in respect of EIA	106
10.5.	Compliance with the Requirement of Article 94 and Schedule 6 of the Regulations 2001, as amended	107
10.6.	Assessment of Likely Significant Effects	110
10.7.	Population	111
10.8.	Human Health	115
10.9.	Marine Biodiversity	120
10.10.	Ornithology	127
10.11.	Terrestrial Biodiversity	134
10.12.	Freshwater Aquatic Biodiversity	143
10.13.	Land & Soil	148
10.14.	Water (Hydrology and Hydrogeology)	152
10.15.	Marine Water Quality	157

10.16.	Air.....	167
10.17.	Climate .....	170
10.18.	Material Assets.....	177
10.19.	Cultural Heritage .....	185
10.20.	Landscape & Visual.....	189
10.21.	Vulnerability of Projects to Major Accidents and/or Natural Disasters ..	193
10.22.	Cumulative Impacts & Interactions .....	197
10.23.	Reasoned Conclusion on the Significant Effects .....	202
11.0	Appropriate Assessment (AA) .....	205
11.1.	Appropriate Assessment Conclusion: Integrity Test .....	205
12.0	Recommendation .....	208
13.0	Reasons and Considerations.....	209

## **Appendix 1 – Appropriate Assessment Screening**

## **Appendix 2 – Appropriate Assessment**

## **Appendix 3 - Specialist Report No. 1, Mr. Emmet Smyth, Inspectorate Scientist**

## **Appendix 4 - Specialist Report No. 2, Dr. Antony Knights, Consultant Marine Ecologist**

## **Appendix 5 - Specialist Report No. 3, Mr. Conor Donnelly, Inspectorate Marine Ecologist**

## 1.0 Background

- 1.1. I note the Order of Mr Justice Allen dated 4<sup>th</sup> May 2021, bearing High Court Record No. 2020 JR 22 wherein it is stated:

*“It is further ordered that the Notice Party’s application for planning permission dated the 20<sup>th</sup> day of June 2018 be remitted to An Bord Pleanála for reconsideration from the point at which the Senior Planning Inspector’s report was submitted to the First named Respondent”*

- 1.2. The High Court, by Judgment dated 24<sup>th</sup> November 2020 found that the Board had failed to correctly identify and comply with the obligation imposed on it by Regulation 44 of the Waste Water Discharge (Authorisation) Regulations, 2007 as amended by the Waste Water Discharge (Authorisation) (Environmental Impact Assessment) Regulations, 2016 to seek the observations of the Environmental Protection Agency on the likely impact of the proposed development on wastewater discharges.

- 1.3. The Board considered the Order of the High Court at a meeting on 17<sup>th</sup> August 2022 and sought the following additional information from the applicant:

- in accordance with 37F(1)(a) of the Planning and Development Act 2000, as amended: Update, where appropriate the EIAR and NIS and any other information submitted;
- in accordance with 37F(1)(c), provide your views on whether the discharge of waste water from the proposed development, in conjunction with existing discharge to the receiving waters would cause or exacerbate breaches of the combined approach.

- 1.4. Having regard to the Order of the High Court, the quashing of the previous decision, and the passage of time, in parallel with the request to the applicant, the Board invited all parties and observers to make any further general submissions/observations that they may have on the planning application. The Board wrote to other parties and observers in August 2022, inviting observations by 30<sup>th</sup> September 2022. 16 no. submissions were received.

- 1.5. The further information requested from the applicant was received on 26<sup>th</sup> October 2023 and was considered to contain significant further information such that the

public ought to have the opportunity to make observations or submission on same. Following the publication of revised public notices, in May 2024, 23 no. submissions were received. The applicant submitted a response to submissions received in 2022 and 2024 which was received by the Board in October 2024. A further response to a single submission (CRR) was received in January 2025.

- 1.6. The Board requested an addendum report from Inspectorate on the basis of the further information and submissions received since the application was remitted to the Board. The addendum report should, inter alia, address the question of whether the discharge of wastewater from the proposed development, in conjunction with existing discharge to receiving waters, would cause or exacerbate breaches of the combined approach.
- 1.7. Following remittal, and in the interests of clarity for third parties, I confirm that a new reference no. was given to the application (ABP-312131-21). However, it remains the same application and the Inspector's Report ABP-301908 and all prior documentation remains on file and forms part of the application file.
- 1.8. Since the further information on behalf of the applicant was received by the Board, a wastewater discharge licence application has been lodged with the EPA, ref. D0553-01.
- 1.9. The Board consulted with the EPA under the provisions of Regulation 44 of the Waste Water Discharge (Authorisation) Regulations, 2007 as amended. In light of the High Court Judgment, the Board furnished its provisional assessment of the likely impact of the proposed development on wastewater discharges and requested the EPA's observations on its assessment and on the likely impact of the proposed development on wastewater discharges generally. This consultation informs this Inspector's Addendum Report.
- 1.10. **Report Content**
- 1.11. As directed by the Board, this report is an Addendum Report to Inspector's Report ABP-301908, and it:
  - (i) considers the further information received from the applicant;
  - (ii) considers the submissions received from third parties and prescribed;

- (iii) addresses inter-alia whether the discharge of wastewater from the proposed development, in conjunction with the existing discharge to receiving waters, would cause or exacerbate breaches of the combined approach; and,
- (iv) assesses the proposed development and provides a recommendation to the Board.

- 1.12. I acknowledge the comprehensive Inspector's Report in respect of ABP-301908 and the point in the process to which the application was remitted. I also note Mr. Justice Allen's comments in respect of the original Inspector's report which "was not shown to be deficient in any way" (para. 40, [2021] IEHC 281). This report accordingly has regard to and refers to the original Inspector's Report ABP-301908 and should be read in conjunction with it. I confirm that I have taken into account the documentation in respect of ABP-301908, the subsequent proposed changes to the elements of the scheme, all further information and submissions received and where, having regard to the foregoing, I have come to a different view on any issue to that set out in the Inspector's Report ABP-301908, I have set this out in this Addendum Inspector's Report.
- 1.13. In terms of Report content, a description of the proposed development is set out having regard to updates in the site context. Planning policy is reviewed to have regard to amendments in the policy landscape since the original Inspector's report. There follows a Planning Assessment, the EIA and the AA conclusion. The EIAR has been updated by way of Addendum and the EIA in section 10 of my report focuses on an assessment of the new information provided including the updates to the EIAR in the EIAR Addendum and the revisions to the proposed development. A revised NIS is submitted, and the AA is therefore a new assessment. New supporting documents, such as the Water Framework Directive Assessment, are submitted. Where new information relating to the project as amended is presented, it is assessed.
- 1.14. The submissions are examined and inform this Inspector's Report. Some of the submissions refer to issues which have been addressed in the Inspector's Report ABP-301908. Save where there has been a material change in position; I do not



propose to revisit those issues in detail where I agree with the earlier assessment and conclusions in respect of these issues.

1.15. This Inspector's Report is prepared with the benefit of expert opinion from:

- Mr. Emmet Smyth, Inspectorate Scientist, who considers matters relating to the combined approach; Specialist Report No. 1, Appendix no. 3 refers.
- Mr. Antony Knights, Marine Ecologist, who considers matters relating to marine ecology; Specialist Report No. 2, Appendix no. 4 refers.
- Mr. Conor Donnelly, Inspectorate Marine Ecologist, who considers matters relating to marine ecology; Specialist Report No. 3, Appendix no. 5 refers.

## 2.0 Site Location and Description

2.1. The table below summarises the main abbreviations used in this report.

Full title	Abbreviation
Wastewater treatment plant	WwTP
Sludge Hub Centre	SHC
Odour Control Unit	OCU
North Fringe Sewer NFS	NFS
Abbotstown Pumping Station	APS
Regional Biosolids Storage Facility	RBSF
Greater Dublin Strategic Drainage Study	GDSDS
Fingal Development 2023-2029	FDP 2023-2029
Fingal Development Plan 2017-2023	2017 FDP

2.2. Site location and description is covered in Section 2.0 of the Inspector's report ABP-301908. Generally, the site context and description have remained as they were when the Inspector's report was drafted in 2019. Where there have been changes to the environs of the site, I have pointed to these in section 3.0 below.

- 2.3. Broadly speaking, the site is located along the southern fringe of Fingal County Council administrative boundary in north Co. Dublin, between Blanchardstown and Baldoyle and in the marine environment between Baldoyle Bay and Ireland's Eye and extends over an area of c. 19.7km (land-based) and c. 6km (marine section).
- 2.4. Working east, the proposed orbital sewer route will commence in Waterville Park, Blanchardstown where it will intercept the existing Blanchardstown main sewer line, known as the 9C Sewer. From this point, it will be routed through the grounds of Connolly Hospital and the grounds of the National Sport Centre to the proposed APS, located adjacent to the M50 Motorway. From the proposed APS, the proposed orbital sewer route will be routed north of, and generally parallel to, the M50 Motorway to the townland of Clonshagh (also known as Clonshaugh), and will pass south of Dublin Airport complex.
- 2.5. The OCU is located at Dubber. The lands along the length of the proposed orbital sewer route are generally open fields, and agriculture is the main land use pattern. The total length of the proposed orbital sewer route will be approximately 13.7km. There are no environmentally designated sites within the proposed orbital sewer route.
- 2.6. The proposed site for the proposed WwTP is located in the townland of Clonshagh, in Fingal. It is situated in open agricultural land approximately 2.4km south-east of Dublin Airport (Terminal 2) and approximately 500 m north of the R139 Road. It is proposed to intercept the NFS in the vicinity of the junction of the proposed access road to the proposed WwTP with the R139 Road. From this point, the proposed NFS diversion sewer will be routed to the proposed WwTP along the proposed access road, c. 600 m.
- 2.7. The proposed land-based section of the outfall pipeline route, c. 11.4 km in length, will commence at the proposed WwTP and will be routed in an easterly direction towards the coast between Baldoyle and Portmarnock. The lands along the length of the proposed (lands-based) outfall pipeline route are generally open fields and agriculture is the main land use pattern. There are no environmentally designated sites within the proposed land-based outfall pipeline route.
- 2.8. The proposed marine section of outfall pipeline route, c. 6km in length, will commence at the R106 Coast Road, north of Baldoyle, and will be routed in a north-

easterly direction across Baldoyle Estuary to the public car park immediately north of Portmarnock Golf Club, where it will turn in an easterly direction and will terminate approximately 1km north-east of Ireland's Eye. The proposed multiport marine diffuser will be located on the final section of the proposed outfall pipeline route. The proposed outfall pipeline route (marine section) will cross under the estuary habitats of Baldoyle Bay SAC (site code: 000199) and Baldoyle Bay SPA (site code: 004016) and will terminate within the Rockabill to Dalkey Island SAC (site code: 003000) and the North-west Irish Sea cSPA (site code: 004236).

### **3.0 Proposed Development**

3.1. The proposed development, known as the Greater Dublin Drainage (GDD) Project, is described in chapter 4 of the EIAR, as updated in chapter 4A of the EIAR Addendum, comprising the following components:

- Proposed WwTP to be located on a 29.8 hectare (ha) site in the townland of Clonshagh (Clonshaugh) in Fingal;
- Sludge Hub Centre (SHC) to be co-located on the same site as the WwTP;
- Proposed orbital sewer route from Blanchardstown to the proposed WwTP at Clonshaugh, c. 13.7km in length;
- Proposed odour control unit (OCU) at the interface between the rising main and gravity sewer elements of the proposed orbital sewer route;
- Proposed North Fringe Sewer (NFS) diversion sewer, c. 600 m in length, to the proposed WwTP;
- Proposed Abbotstown pumping station to be located in the grounds of the National Sports Campus (NSC);
- Proposed outfall pipeline route, c. 11.4 km in length, from the proposed WwTP to the outfall point approximately 1km north-east of Ireland's Eye;
- Regional Biosolids Storage Facility (RBSF) to be located on an 11.4ha site at Newtown, Dublin 11.
- The inclusion of ultraviolet (UV) treatment at the proposed WwTP in Clonshagh (Clonshaugh); and

- The extension of the River Mayne Culvert along the proposed access road to the proposed WwTP. (from 21m to 25m to cater for the full width of the future north south link road - Engineering Report Add).

- 3.2. The Cover Letter which accompanied the further information (dated 26<sup>th</sup> October 2023) acknowledges that the RBSF also formed part of the Ringsend wastewater treatment plant upgrade SID application for which permission was granted, ABP-301798-18 refers. This letter states: “In circumstances where the RBSF has already been granted permission, planning permission for the RBSF itself is no longer required as part of the GDD application as remitted.” I am aware that construction has commenced for the RBSF and note that permission is no longer being sought for the RBSF as part of the GDD project. The Board will note that Volume 4A Parts A and B of the EIAR Addendum which relate to the permitted RBSF have also been updated and are submitted as part of the further information.
- 3.3. For the purposes of clarity, table 3.1 indicates the proposed development and how it has evolved from the application lodged in 2018 to that presently before the Board for consideration:

<b>Proposed development components</b>	
<b>ABP-301908 (2018)</b>	<b>2023 Further Information (312131)</b>
WwTP;	WwTP;
Sludge Hub Centre (SHC);	Sludge Hub Centre (SHC);
orbital sewer route c. 13.7km in length;	Orbital sewer route c. 13.7km in length;
Odour control unit (OCU)	Odour control unit (OCU)
Proposed North Fringe Sewer (NFS), c. 600 m in length,	Proposed North Fringe Sewer (NFS), c. 600 m in length,
Abbotstown pumping station (APS)	Abbotstown pumping station (APS)
Outfall pipeline route, c. 11.4 km in length,	Outfall pipeline route, c. 11.4 km in length,

Regional Biosolids Storage Facility (RBSF)	No longer part of proposed development, permitted by ABP 301798-18
Ultraviolet (UV) treatment, introduced at Oral Hearing and included by condition no. 5 of the Inspector's Report.	Ultraviolet (UV) treatment (as introduced at the Oral Hearing)
Culvert extension to proposed culvert over the River Mayne, introduced at Oral Hearing and included by condition no. 11(b) of the Inspector's Report.	Culvert over the River Mayne (as introduced at the Oral Hearing).

- 3.4. The construction of the proposed orbital sewer and outfall pipeline (land-based section) is estimated to take 18 months. In advance of pipeline construction, a period will be required for the fencing of the construction corridor, topsoil stripping and archaeological monitoring of the excavations. Post pipeline construction, a period will be required for reinstatement and establishment, particularly where grass is to be planted. The construction period for the subsea pipe-laying element is expected to take 6 months.
- 3.5. Updates with respect to development and locational context (save for a description of the RBSF) are set out in section 3.8.
- 3.6. For clarity and to address queries raised by third parties, the primary separate statutory consents required are:
- A wastewater discharge licence from the EPA
  - Fire safety certificate under building control legislation
  - A Maritime Area Consent (MAC).
- 3.7. The applicant in its Response to Submissions Report notes that the Foreshore Licence regime has been replaced by the Maritime Area Planning Act (MAP) 2021 and will no longer be progressing the 2020 Foreshore Licence application. There is no specific dredging licence regime in Ireland. Dredging and the disposal of dredging material is regulated by the Dumping at Sea Act 1996, and any dredging activity is

regulated by a Dumping at Sea permit granted by the EPA. The applicant has indicated that it will secure and comply with such licence as is required.

### **3.8. Updated Site Context**

#### **3.8.1. Orbital pipeline route - Blanchardstown to N2 (Ch 0,000-CH 5,500)**

3.8.2. The project includes approximately 26km of pipeline routes linking the APS to the WwTP at Clonsaugh and also linking the WwTP to the marine discharge point. The Blanchardstown to N2 (Ch 0,000-CH 5,500) section contains 5,500m of the orbital pipeline route, the APS and compounds 1 and 2. In general the working corridor for the open cut sections of the orbital pipeline (and land based section of outfall pipeline) will be 40m wide. Work will be undertaken in short lengths and durations. Trenchless techniques will be used for the crossing of existing infrastructure and watercourses.

3.8.3. The orbital pipeline commencement point Ch 0,000 in the grounds of Waterville Park is to the west of the Connolly Hospital campus. This is the location of the recently completed Blanchardstown Regional Drainage Scheme. At this location the proposed orbital sewer is a 1,800mm diameter gravity sewer. It is stated to pass under the roots of the mature trees and will also pass under an old stone estate boundary wall. The route takes a south-easterly direction between a former school and the Tolka River, crossing under Mill Road, skirting the south-western boundary of the hospital grounds and passing a further 450m before intersecting the roundabout at the hospital entrance. It is at this point that the sewer would connect to 9C existing sewer, at Ch 0,500m. The route next follows a more easterly direction again broadly parallel to the Tolka and passing just over 110m south of St Francis hospice. Trenchless techniques are to be used in Connolly hospital grounds and for the construction of 1km of pipeline between Waterville Park and APS. The sewer will pass across a watercourse (EPA name Tolka\_040) at Ch 0,700m.

3.8.4. Between Ch 1,000 and Ch 1,200 is the site of construction compound 1 which is aligned parallel to the M50 and situated about 80m north of the carriageway. The north-eastern edge of compound is adjacent Caoimhin's church and graveyard, a protected structure, and located on the grounds of the NSC in an area where cross-country running events occur. There are a number of mature trees in the vicinity and

to the east is a large planting of less mature trees and some estate boundary walls. The sewer at this location is a 1,400mm rising main from APS.

3.8.5. The route continues in a north-easterly direction in parallel with the M50 for a distance of 550m to cross a private road at Ch 1,750. The orbital pipeline route continues to pass in parallel to the M50 through the NSC grounds and taking a northeasterly route at Ch 2,200 through agricultural lands to avoid cottages and a Traveller community site. The route continues on in parallel with the M50 passing to the north of a waste facility at CH 2,800 and eastwards through the Premier Business Park south of existing units and north of planned units. The route crosses under the Cappagh Road at Ch 3,400 near Cappogue cottages and Construction Compound 2 is to the east of Cappagh Road. Huntstown quarry is to the north at this location. The route continues parallel to the M50 through Kildonan south of Kildonan House along agricultural lands until diverting north-easterly at Ch 4,600 to avoid the major electricity substation at the junction of the M50 and the N2, where it passes through the site of a planned materials recovery facility at Ch 4,900 and then going under the R135 and the N2 at Ch 5,300 and Ch 5,500 respectively. At this point, the sewer is closest to the RBSF which is located c.880m north along the R135.

3.8.6. **Orbital Pipeline Route - N2 to M1 (Ch 5,500 to 12,600)**

3.8.7. Following crossing of the N2 and avoiding the Baleskin Reception Centre the orbital pipeline route follows the dividing field and townland boundary travelling initially northwest between Coldwinters and Baleskin, immediately south of a recently developed container storage yard and Coldwinters ponds, and changing direction to a southeasterly before passing underneath the R122 at Ch 6,200 and continuing in an easterly direction heading north of Dubber Cottages and south of Dubber House and across Dubber Lane. At Ch 6,250 is the site of the proposed Dubber Odour Control Unit (OCU). This marks the change to a 1,800 diameter gravity sewer to the WwTP. The OCU would be 250m north of Baleskin Reception Centre and at its closest point to the long rear gardens at Meakstown / Dubber Cottages the separation distance would be c.350m at the nearest point.

3.8.8. The route passes parallel and to c. 1km south of the airport runway, through an area of agricultural lands, south of Horizon Logistics Park business park and north of Sillogue Water Pumping Station before crossing Sillogue Lane and continuing east

through Sillogue golf course. The sewer will cross under a watercourse at Ch 8,300 (EPA name Santry\_010). At Ch 8,400 the route turns to the south-east where Construction Compound 3 is proposed at Ch 8,900. The compound location is immediately north and west of the M50/R108 interchange at Ch 9,100 in Ballymun. The compound is adjacent to the entrance to a business park which houses the NCT centre and a Traveller community site. The pipeline then crosses under the Naul Road/R108 where, between Ch 9,100 and Ch 10,200, the orbital pipeline would pass close to the M50 taking a northerly route at Ch 10,200 and passing through the west side of a disused long stay car park. The pipeline passes underneath a watercourse (Mayne River (EPA name Mayne\_010) immediately south of the disused carpark at Ch 10,600.

3.8.9. The route takes an easterly direction at Ch 11,100 and passes south of the old airport road – the DAA lands are at the other side of the road and airport landing lights are located just beside the orbital route. Construction compound 4 is at Ch 11,400 to the west of existing offices and business park. Compound 5 is located at Ch 11,700 to the east of the Old Swords Road at Collinstown Cross, which is tunnelled under. The alignment continues to the east through the southern end of the ALSSA sports grounds and north of Dardistown cemetery, which is separated from the works site by a hedge, passing a long-term car park to the south and crossing a roundabout at Ch 12,600 before it meets the M50.

#### 3.8.10. **Orbital / Outfall pipelines - M1 to Marine Diffuser (Ch 12,700 / Ch 5,935)**

3.8.11. The orbital pipeline route passes under the M1 at Ch 12,700 through agricultural lands and north of the Carlton Hotel and other commercial development. The route crosses the narrow and busy Clonshaugh Road (Stockhole Lane) at Ch 13,400 close to residential dwellinghouses. This is the location of the proposed egress road from the Clonshaugh WwTP site.

3.8.12. The 1,800 mm outfall pipeline (land section) takes off from the north-east corner of the WwTP site in the townland of Springhill where it immediately crosses under a watercourse, Cuckoo Stream (EPA name Mayne\_010). The outfall pipe continues through agricultural lands, travelling first in a northerly direction and turning at Ch 0,700 due east to the Malahide Road/R107 crossing it to the east of proposed construction compound 7 at Ch 1,1850 where it continues through agricultural lands



and adjacent to school to the north, and recently constructed housing (Newpark Drive). It travels east and turns south at Ch 2,600 before following the western and southern boundaries of Trinity Gaels GAA grounds. Construction compound 8 is located southeast of the GAA club, at Ch 3,700, where it is bounded by the Druimnagh Road/R124. Compound 7 will be accessed from the south (Moyne Road/R123). The outfall pipeline route continues east, passing a playground to the north and a pumping station to the south at Ch 4,100 and on towards the railway line which is crossed at Ch 4,600. The pipeline passes eastwards through agricultural lands before reaching construction compound 9 in Maynetown at Ch 5,200, with access to the south via Moyne Road / R123. Residential development is under construction nearby, to the north, a temporary access to the residential lands traverses the pipeline route. Construction compound 9 is located to the north of residential dwellings at Ch 5,300.

- 3.8.13. The outfall pipeline route (marine based section) commences at Construction Compound 9, before crossing underneath the recently constructed Portmarnock to Baldoyle greenway and the R106. It will be tunnelled in bedrock under a stiff boulder clay. Routed in a north-easterly direction for 1 km under Baldoyle estuary, across the Golf links Road it comes through a grassed area beside the beach car park from where it would follow in an easterly direction for 5 km out to sea terminating 1 km north-east of Ireland's Eye. The pipeline route follows a falling profile from 9 m OD at the R106 Coast Road to 2.8 m OD in the green space and -22.84 m OD at the discharge point. The proposed outfall pipeline route (marine section) will operate as a pressurised gravity sewer.
- 3.8.14. Associated with the trenchless crossing of the estuary are construction compounds 9 to the west and 10 to the east of Baldoyle Bay estuary. An area of 150m X 100m will be required at each compound with requirements for bentonite and fuel storage as well as an office and a crane. Access to the beach car park at this location, which is to the south of the golf club is to be maintained for the duration.
- 3.8.15. The outfall pipeline (marine section) will have an internal diameter of 2m and be at depths between 15m and 20m below ground level. Pipe sections will be installed as the micro tunnelling machine progresses. Tunnelling will take 15 months on a 24-hour seven-day basis. The outfall pipeline route (marine section) would emerge

approximately 600m offshore terminating below the low tide water mark. This point is the tunnel / subsea pipeline interface ('the interface').

- 3.8.16. The outfall pipeline route (marine based section) between Ch 2,000m and Ch 5,940m would be constructed through subsea pipe laying (dredging) techniques whereby a trench is dug in the bed and the pipe positioned into it. A backhoe dredger would be used in shallower areas and dredged material would be placed in a barge and deposited and stockpiled parallel to the outfall trench within a 250m wide construction corridor. In deeper areas a trailer suction hopper dredger (TSHD) is likely to be required and this will involve depositing and stockpile excavated material parallel to the proposed trench within the 250 m construction corridor. This material would be used to refill the trench once the pipe is installed.
- 3.8.17. In the dredged section, a long length large diameter polyethylene pipe would be installed. This will be constructed at the factory to the required diameter in continuously extruded strings up to 650 m long. Potential assembly areas are Dublin port lands and adjacent the pipeline trench. The assembled pipeline strings will be towed to the outfall location, surface positioned over the trench and installed in a continuous operation. When the pipe is in place at the trench previously excavated material will be replaced around and over the pipe. Diffuser valves will be installed (bolted) on the vertical risers using marine divers. These valves are integral to the final section of the outfall pipeline route (marine section).
- 3.8.18. There are a number of options presented for the connection of the pipe strings. There are also a number of alternatives for concrete ballast. The interface between the tunnel and subsea pipeline sections will be constructed over a six-month period as described on page 21 of Chapter 4 of the EIAR.

### **3.9. Development Components**

- 3.9.1. To assist the Board, I have included a summary of the principal components of the development, updated as necessary.
- 3.9.2. **Abbotstown Pumping Station (APS)**
- 3.9.3. The proposed APS site will be located in the grounds of the NSC, Abbotstown, adjacent to the M50 Motorway. The closest point of the site of APS to the nearest

building at St Francis Hospice is 150m. The proposed APS will consist of a single 1-storey building over basement. The above ground building will have a floor area of 305m<sup>2</sup> and maximum height above ground level of 10m with air control stacks which will extend to a maximum of 10m above roof level. The basement will be 17m in depth with a floor area of 524m<sup>2</sup>. The invert level of the inlet sewer is 17m below ground level. There is rock at 2.5 m below ground level. The aboveground component will be a small single storey building of vernacular design (rendered concrete building with copper sheeted roof). Construction and operation access for the proposed APS will be through the grounds of the NSC. Power and energy sources for the proposed APS will be provided primarily by electricity fed from suitable connection points off the national grid.

#### **3.9.4. Wastewater Treatment Plant (WwTP)**

- 3.9.5. The wastewater treatment capacity to be provided under the Proposed Project is 500,000 Population Equivalent (PE). The proposed site for the proposed WwTP is located in the townland of Clonshagh on 29.8ha of open agricultural land, approximately 2.4km south-east of Dublin Airport and approximately 500m north of the R139 Road. The Cuckoo Stream (a tributary of the Mayne River) lies immediately north of the proposed WwTP site, with the Mayne River itself lying approximately 400m to the south of the proposed WwTP site. The southern boundary of the proposed WwTP site is defined by a road proposal with connection to the south via the R139. Chapter 6 and Sheet no. 17 of the Fingal Development Plan 2023-2029 indicate connectivity and movement objectives.
- 3.9.6. The lands slope in a west-east direction from 45.00 metres above Ordnance Datum (mOD) to 39.00mOD with a central elevation of approximately 42.30mOD.
- 3.9.7. Construction and operation access for the proposed WwTP will be from the R139 Road with egress to the Clonshaugh Road and it will incorporate a left turn in/left turn out policy.
- 3.9.8. The plant will be subject to the requirement to achieve emission limit values (ELVs) which will be set by licence from the EPA.

- 3.9.9. The main features of the site layout remain as previously presented in section 3.7 of the Inspector's Report ABP-301908 but with the addition of UV treatment and extended culvert over the River Mayne to the south of the WwTP.
- 3.9.10. The UV treatment system proposed at the WwTP will be designed and operated to achieve a maximum of 20,000 cfu/100ml (millilitres), with an average concentration in the order of 5,000 to 6,000 cfu/100ml, in the final effluent. UV treatment will also reduce and control the spikes and variability of the concentrations of E. coli discharged from the proposed WwTP, thus providing greater protection to the receiving waters.
- 3.9.11. The proposed UV treatment system will be designed for the expected incoming flows to the proposed WwTP and will be installed on the final effluent line in the north-eastern corner of the proposed WwTP site, as shown in Figure 4.1 (Zonal Arrangements) in Volume 5A of this EIAR Addendum and in Addendum Planning Drawing Number 32102902-2120.
- 3.9.12. An odour control system at the site will involve extracting air from within the various buildings and tanks on a continuous basis. Fans located outside, adjacent to the odour control unit, will draw air through ducting to the odour control units comprising an organic filter media. The treated air will be emitted to the atmosphere through vertical stacks which will extend to a height of maximum height of 24m above ground level.
- 3.9.13. Densely planted embankments will be provided for visual screening at boundaries adjoining the rural context to the east, north and west of the proposed WwTP site. The southern boundary will be presented as a bold architectural landscape treatment in order to tie in with the future development of the lands to the south (future IDA Business Park).
- 3.9.14. Power and energy sources for the proposed WwTP will be provided through a combination of electricity, natural gas and biogas. Electricity and natural gas will be supplied from suitable connection points off the national grid. Biogas generated on-site during the anaerobic digestion of sludge will be used to generate electricity and recover heat through the Combined Heat and Power (CHP) system. The CHP system will also generate electricity from natural gas. The availability of electricity,

natural gas and biogas at the site will ensure security of an uninterrupted power supply to the proposed WwTP site.

#### 3.9.15. **Sludge Hub Centre (SHC)**

3.9.16. The proposed SHC is to be co-located on the same site as the proposed WwTP. It will have the capacity to provide sustainable treatment for municipal wastewater sludge and domestic septic tank sludges generated in Fingal and transported via the road network in tankers and/or covered skips, to produce a 'biosolid' end-product. In addition, the proposed SHC will be designed to accept sludge from private property owners within the area of Fingal who are currently served by septic tank or individual domestic wastewater treatment systems. The sludge treatment capacity is 18,500 tonnes of dry solids (TDS)/annum to provide for a projected 750,000 PE at the design year horizon of 2050. This figure caters for the import of sludge from other municipal WwTPs in Fingal.

3.9.17. It is proposed to treat the sludge using advanced anaerobic digestion to produce a 'biosolid' end-product suitable for reuse in agriculture, with the biogas produced during the treatment process used on-site for energy recovery. The 'biosolid' end-product will be transported to the proposed RBSF via the road network in covered trucks for seasonal storage.

3.9.18. An indicative design, with a maximum height of buildings of 18m above ground level, with buffer tanks, dewatering (centrifuges); thermal hydrolysis (providing pasteurisation) tanks; mesophilic anaerobic digestion tanks; sludge/biosolid operational storage building; and biogas storage has been provided.

#### 3.9.19. **Proposed North Fringe Sewer (NFS) Diversion Sewer**

The proposed NFS diversion sewer will transfer flows in the NFS upstream of the point of interception to the proposed WwTP. It is proposed to intercept the NFS near the junction of the proposed access road to the proposed WwTP and the R139 Road in lands within the administrative area of Dublin City Council. The length of the proposed NFS diversion sewer from the point of interception to the WwTP will be 600m, with a required diameter of 1,500mm. The proposed NFS diversion sewer will operate as a gravity sewer between the point of interception and the proposed WwTP and as a pumped rising main within the proposed WwTP site.

## 4.0 Submissions

Following the Order of the High Court and the Board's invitation, 16 no. submissions were received in 2022, the details are set out in section 4.1 below.

Following the submission of further information and publication of revised public notices, 23 no. submissions were received, the details of which are set out in section 4.2 below.

### 4.1. Submissions (2022)

#### 4.1.1. Local Authorities (2022)

None received.

#### 4.1.2. Prescribed Bodies (2022)

#### 4.1.3. Department of Housing, Local Government and Heritage (Development Applications Unit) (DAU)

- Recommendations and observations of 17th August 2018 still stand.
- Request the Board to be cognisant of ecological baseline regarding passage of time.

#### 4.1.4. Transport Infrastructure Ireland (TII)

- References National Planning Framework (NPF), National Development Plan (NDP) policy, Spatial Planning and National Roads Guidelines. Notes components of the proposed development; the orbital sewer is to run broadly parallel to the M50 and thus crosses the M1 and N2. Construction compounds 1,2 and 3 abut the national road network.
- Refers to previous correspondence issued; consultation required to avoid the GDD scheme prejudicing the efficient operation or future road schemes upgrades. Required the GDD scheme identify existing and future national roads and their structures.

- Motorway crossing will require approval from TII. Best practice required. Conditions set out relating to techniques in traversing the existing national road network.
- Future Metro/Luas/BRT lines are a matter for the National Transport Authority (NTA).

#### 4.1.5. Iarnród Éireann

- Project has the potential to significantly impact safety of operational railway. Must engage with Iarnród Éireann (IE).
- Proposed sewer lies directly adjacent to and under the Dublin-Belfast Railway line between underbridge UBB20 to the south and overbridge OBB21 to the North. Drawings showing boundaries are unreliable as it does not take account of the historical drainage channels running parallel to the railway at the crest of the cutting within original railway corridor. Probable that the proposed development encroaches onto CIE/IE lands.
- Liaise with IE re agreeing position of new access shafts and services crossing along over or under railway be the subject of a licence agreement.
- Do not undermine integrity of the embankment supporting culvert and overbridge,
- Set out a number of conditions, including a comprehensive and detailed ground site investigation/report and works design statement prior to detailed design stage and issue to IE for comment.

#### 4.1.6. **Third Party Submissions (2022)**

The overview below sets out the main issues which I consider are most relevant. All written observations have been read and taken into account in the preparation of this report. The submissions, and associated appendices, are on file for consideration by the Board. The Board will note that these submissions predate the updated application following case remittal to the Board.

- Need for dumping at sea licence
- Role of MARA/status of Foreshore Licence/need for a MAC

- Oral Hearing (OH) requested.
- Outdated surveys informing application; CIEEM advice that reports over 3 years cannot be relied upon.
- Updated EIA legislation in relation to portal and expert requirements.
- Queries implementation of Foreshore regulations; unclear if the foreshore element will be carried out by ABP or MARA.
- Cumulative impacts in respect of new planning applications in the vicinity of the WWTP and along the orbital route. Also cumulative discharges from Doldrum Bay and Portmarnock pumping station and misconnection discharges. Concerns raised regarding impact of Ringsend plant together with proposed development. No cumulative impact with Dublin airport.
- Sediment modelling: never properly assessed. Modelling based on an average trenching depth of 5m, at interface the trench may need to be 11m deep. Modelling didn't take account of deposition. Dredging and pipeline will result in geomorphic effects on the estuary. Only modelled for a single port diffuser when it's for a multiport diffuser. Calls for additional modelling.
- Hydrodynamic modelling results were not fully calibrated, referencing wave action, impact of climate change, and operational phase impacts.
- Indicative drawings: nearly all drawings are indicative. There are no subsurface engineering drawings for the WwTP and pumping stations. Detailed design at post consent - contrary to the EIA and Habitats Directive.
- WWTP process: there are 3 possible WwTP processes but only one has been subject to assessment.
- Site selection: chosen site not achievable due to constraints imposed by the new Fingal Development Plan, citing material contravention. Calls for more up to date evaluation on site selection. The Board should have requested further details of evaluation of alternatives. Scale: Plant is too big. Should be smaller plants built in a variety of locations. Criteria used to evaluate Clonsbaugh as the designated site and southern corridor pipeline is flawed, not balanced, favours southern route because it is shorter and more cost effective. Totally



unsuitable location given the close proximity of densely populated areas citing potential to seriously injure residential amenities.

- UV treatment: is not 100% effective at neutralising pathogens and bacterial disease. UV treatment: no report was issued at the OH as to how this process would take place. Planning process was not transparent/could not be fully evaluated. No drawings or plans of infrastructure for UV element. Lack of time to consider tertiary treatment which was introduced in the OH. References Covid Virus found in WwTPs. Detailed proposals to deal with viruses should be published and assessed.
- Potential shellfish impacts: impact/risks to shellfish and razor clam to e-coli. Razor clam fishing area wasn't clear.
- Flood risk: querying if new culvert will lead to flood risk.
- Baldoyle Bay SPA: No stage 2 NIS assessment was carried out for waterbirds.
- Ireland Eye SAC: disagrees with screening out of the SAC.
- Inadequate biodiversity impact assessment on species such as frogs, seals, European eel.
- Clonsaugh WwTP as a single-phase project is not correct, referring to tender documents as an appendix.
- Capacity of system in the event of a process failure is questioned, which would force raw sewage into the Tolka River from the Blanchardstown regional sewerage scheme. In addition, no actual process failure modelling for discharges to rivers upstream of GDD plant. Only electrical failures addressed.
- Bentonite and air breakout risk tunnelling under the estuary. Mitigation measures in the NIS are remediation measures (washing the vegetation post spill), triggering Habitats Directive 6(4), IROPI. Borehole sampling was not undertaken under the estuary leading to deficient information and referring to a foreshore consent application sought by Irish Water and subsequently

withdrawn for non-intrusive surveys along the proposed pipe route. A fault has been identified in borehole samples at compound 10.

- Bioaccumulation impacts on harbour porpoise, referring to scientific reports re freshwater skin disease in dolphins, and scientific report exposure of juvenile harbour porpoises to polychlorinated biphenyls. UV treatment: not 100% effective at neutralising pathogens and bacterial disease. Microplastics: was not assessed by applicant nor Inspector.
- Impact on Light-bellied Brent Geese and other Baldoye SPA SCIs as Compound 9 will occupy designated ex-situ feeding site. Also designated an area as quiet zone for feeding and roosting wetland birds. Bird surveys of quiet zone was inadequate. Compensation will not be in place before the habitat is lost, are no mitigation measures for compounds 9 and 10. Condition of Article 6 (4) of the Habitats Directive should be fulfilled. Use of Murrough Spit as a "replacement" feeding area cannot be considered as it is contained within the Baldoyle SPA.
- Concern over industrial wastewater diverted to GDD project on shallow coastal waters. Waste will be brought back in on the tides destroying Portmarnock Beach. Likely that the plant would further deteriorate bathing water quality. Dredge and fill across Portmarnock Velvet Strand is totally inappropriate for a Blue Flag Beach.
- Risk of major accidents as the flight path of Dublin airport is over the biogas storage tanks, querying blast radius, HSA consultation. It was not clear that there was a biogas element.
- The SHC cannot be considered ancillary and utility development to sidestep material contravention of zoning.
- No assessment of freshwater impact/temperature impact of discharge on marine ecology.
- Why no tertiary treatment nitrogen removal/phosphorous recovery/not BAT
- New updated [archaeological] assessment required - new monument in path of pipeline trenching corridor at Maynetown by compound 9.

- No management plans for Ireland's Eye SAC/SPA, Baldoyle SAC/SPA, Rockabill to Dalkey SAC and others may preclude the board from being able to assess impacts under the Habitats Directive.
- Section 4 discharges in Tolka and rivers connected to Ballymun PS must be modelled in addition to Waste Water Discharge Licence (WWDL) overflows.
- Health and environmental impact from the waste of several counties transported into the locality is a huge concern.
- Negative impact and lower the reputation of area.
- Further exacerbate traffic problems, referencing trucks on the N32, R139. Baskin Lane or Clonshaugh Road are unsuitable for traffic.
- Noise impact from construction and operational phase.
- Not possible to control the odour.
- Negative impacts on tourism and leisure in the area.
- Visual impact from ground and air.
- Request updated hydrological modelling around discharge pipe, surveys, EIAR, NIS, detailed report on UV treatment, assessment of micro and nano plastics.
- Amendments to CPO may be required.
- Consultation: Significant number of new homes in area that are excluded from process, request it is reopened to include public and address concerns. Queries delay in reactivating case and communications.
- Marine pollution risk: release of raw sewage into marine waters is a real possibility. Dublin Bay was designed as a Biosphere.
- Air pollution: the exhaust gases from the tanks are a mixture of ammonia, methane, hydrogen sulphide, sulphur dioxide, carbon dioxide and nitrogen dioxide and will be blown across the Children's Hospital, General Hospital (Connolly) and St. Francis Hospice.
- Electricity usage: at time of electricity shortage and cost.

- Location of drogue and dye release points were not clarified by UE. Consider the model is flawed. Want new dye and drogue surveys.
- Marine construction noise: Inspector failed to address the issue of works taking place at both the inshore area and the outfall area simultaneously and resulting disturbance to the seabed and water column. Active acoustic calibration is strongly recommended. No evidence of modelling results for piling noise or piling and dredging combined. Queries location of noise modelling. Calls for new modelling.
- Birds: Ireland's Eye is an important breeding ground for seabirds. Project will have a major impact on the North Bull Island Nature Reserve, referring to Brent Geese. Proposal is contrary to the EU Birds Directive.
- Chambers Ireland reiterate comments in original submission on importance of the scheme, including for economic growth, FDI and denser growth, referencing NPF, and Census 2022. A much-needed development; necessary to enable and support residential and commercial development and to protect the environment.

## 4.2. Submissions (2024)

### 4.2.1. Local Authorities (2024)

#### 4.2.2. Fingal County Council

- Has no further comments to make.

#### 4.2.3. Meath County Council (MCC)

- The project is of strategic importance to Co. Meath and is supported by MCC. Sets out the site location and planning history, planning policy, including setting out relevant sections of the County Development Plan, and legislation.
- Re In-combination assessment NIS; ABP 319422 (400kV electrical cable) has not been included in the NIS. GDD project overlaps/follows similar corridor.
- Internal referrals:  
Transportation Dept. - no objection.

Archaeology Dept. - noting mitigation measures in the 2018 application, no additional measures are proposed. Quantity of trial trench resting in greenfield areas should be stated. Did not have access to Appendix 16 Cultural Heritage Report. 2018 mitigation measures should be located on a single map series. Unknown archaeological heritage should be covered under mitigation works. Sets out potential conditions.

- Sets out some key points and amendments from the Addendum Reports. Provides a conclusion from the WFD Assessment. Advises a Revised NIS was submitted listing changes considered.
- MCC Comments: consider MCC Archaeologist's comments, attached report with submission; consider requirements for future expansion; consider cumulative impacts of SID application including subsurface congestion in the road corridor; apply a condition to implement all environmental mitigation proposed and additional mitigation proposed by MCC, including that an Ecological Clerk of Works is employed.

#### 4.2.4. South Dublin County Council (SDCC)

- SDCC supports the principle of the development and welcomes the wastewater treatment capacity the project would bring.

#### 4.2.5. **Prescribed Bodies (2024)**

#### 4.2.6. Department of Housing, Local Government and Heritage (Development Applications Unit)

- Its original observations and recommendations of 17.08.18 and 29.09.22 still stand.
- Together with Rockabil to Dalkey Island SAC the project (route of the outfall pipeline from the Velvet Strand to the outfall discharge point) will now also be within the North-West Irish Sea cSPA (site code 004236).
- Badgers: In the section of its original submission dealing with Badgers, the Department suggested that the Board should note that (working having impact on badger setts would require a licence from the National Parks and Wildlife Service (NPWS). Such advice was imparted on the context the NPWS had

been accustomed to issue licenses permitting temporary or permanent closure of setts, or sometimes their destruction, to facilitate development works in certain situations and under strict conditions. Subsequent legal advice to the Department is: while deliberately damaging or destroying a badger sett, as a breeding or resting place of a protected wild animal, is normally an offence, damaging or destroying a sett in the course of carrying out a development, which has received planning permission is not unlawful. Any interference with or the destruction of a sett must consequently be regulated by the attachment of conditions to the permission.

- Newts: notes additional surveys for smooth newts carried out in 2021 and 2023 in 3 sites. A population of this protected species are present in a number of ponds at Coldwinters. Measures are proposed to mitigate adverse impact including routing the sewer away from the principal newt pond and transferring newts.
- Common frog: no mention of their presence at the 3 sites surveyed for common frog, but would be expected to occur, or in any documentation supporting the present application. Local observers have reported a frog population at the site adjacent to the Ballymun NCT centre and are likely to be present at Coldwinters and possibly at Toberbunny and elsewhere on the orbital sewer route.
- Habitats + fen pondweed: adjacent to Ballymun NCT Centre, interconnected ponds are present - discussed during the OH. In May 2022, NPWS aquatic ecologist and consultant freshwater botanist identified various plant species typical of hard-water lake habitats, including *Potamogeton coloratus*, fen pondweed, third record for Co. Dublin and the first for 35 years. Species of stone-worts, f*Chara spp.* were also found to occur in the ponds.
- A number of prior to commencement conditions are recommended include a badger conservation plan, amphibian conservation plan, the establishment of one or more new ponds adjoining the sewer route. And translocating elements of and amphibian species, frog and smooth newt, plant communities to new ponds.

#### 4.2.7. Dublin Airport Authority (DAA)

- Wildlife/Bird Hazard: proposed SuDS measures must not give rise to any increase in bird activity. Requests a condition requiring mitigation measures should there be undue bird/wildlife hazards.
- Outer Public Safety Zone: set out policy objectives DA018 and DA019 of the FCDP 2023-2029 which seek to promote appropriate land use patterns in the vicinity of the airport. Request that the Board have regard to the density recommendation under Table 6.1 of the ERM Report, Public Safety Zones (2005) ensuring the development remains compliant with density restriction for working premises of 110 persons per half hectare during the hours of operation.
- Crane Use: Request a condition to any grant of permission requiring the development to agree proposals for crane operations in advance.
- Traffic and Transport: the development has significant potential to impact on the external road network; wayleaves could inhibit future development of airport lands particularly to the east of the R132. ABP should have regard to Objective EI03 of the Dublin Airport LAP not to prejudice the orderly operation and continued growth of the Airport. Request a condition to agree construction traffic plans with DAA.

#### 4.2.8. EPA (comprising 2 no. submissions)

The first raises the following:

- The development requires a licence; licence application not yet received. EPA granted a revised WW discharge licence to UE for the GDA agglomeration which includes Ringsend WwTP, which is being upgraded to PE of 2.4million. The proposed Clonsaugh WwTP is intended to augment the Ringsend WwTP.
- Setting out requirements in respect of EIAR requirements and consultation procedures should a licence application be received. The development should not result in a contravention of the Water Framework Directive, Urban Waste Water Treatment Directive, Habitats Directive, Birds Directive and Environmental Liabilities Directive. The Board should consider a condition

requiring UE to submit a licence application within 6 months of grant/prior to any development.

- Draws the Board's attention to Regulation 41 of the WWD Regs in particular that the determination of the application should not cause a breach or exacerbate breaches of the combined approach or otherwise cause serious water pollution. Any consultation to the Agency should include the Board's assessment of the likely impact of the proposed development on WW discharges (Reg. 44).

The second submission was submitted in response to consultation under Regulation 44 of the WWD Regulations, further to the High Court Judgment, the contents of which are considered at section 9.10 and in the EIA section (section 10.) of this Inspector's Addendum Report.

#### 4.2.9. Health Service Executive (HSE)

- The submission is in addition to the 2018 submission.
- Climate action: some additional means to reduce emissions could be employed in construction and development phases. The National Environmental Health Service (NEHS) recommends use of zero emission or low emission vehicles during construction. Also shuttle bus and active travel measures for workers. Explore renewable energy generation.
- Reference to climate adaptation is lacking. Should be assessed for climate change adaptation, including risk assessment that is not just confined to severe weather events, following which a response plan should be put in place across the entire Emergency Management Framework.
- Population health: look for ways to enhance or protect population health in line with a Health in All Policies approach and Health Ireland Vision.

#### 4.2.10. Irish Aviation Authority

- Support the submission made by DAA in June 2024. Request if permission is granted, that conditions are attached: to ensure appropriate wildlife hazard reduction techniques during construction and operation; to notify DD/Dublin Airport and Air Nav Ireland of intention to commence crane operations.



#### 4.2.11. NTA

- The GDD project would cross the proposed bus corridor at the Collinstown Cross junction on the R132 (Bus Connects Swords to City Centre Core Bus Corridor Scheme), welcomes the consideration given to the scheme in the app documentation. Construction phases could overlap. Elements of GDDP, manhole 51 and access road to compound no. 5 have potential to clash with elements of works for the bus scheme. Request that applicant is conditioned to engage with the NTA.
- NTA request that Engineering Specialist Report for Crossings and the description of the proposed project should be updated to reference the Metrolink project. There is potential for the construction phases of the proposed Metrolink project and the GDDP to overlap. Request that applicant is conditioned to engage with the NTA and TII Metrolink Project Team.

#### 4.2.12. TII

- Noting the location of the proposed orbital sewer route, temporary interaction with the national road network may arise.
- Citing policy in relation to safety, capacity and strategic function of the national road network.
- Horizontal Directional Drilling (HDD) or other appropriate alternatives shall be utilised for all crossings of the national road network, details to be agreed.
- Elements of the national road network are operated and managed by entities other than TII. Guidance for traffic and road assessments and construction that may be necessary. Any crossing of the national road network shall require prior consultation with TII and compliance with TII standards.
- 3 conditions are recommended relating to (i) HDD crossings design and construction methodology (ii) a CEMP shall include specific information on HDD crossings and (iii) preparation of a Construction Traffic Management Plan to be agreed with TII and specifies information to be dealt with.

#### 4.2.13. Commission for Railway Regulation (CRR)

- Setting out standard consideration the applicant should take account of including requirements for consultation and to address issues raised by Iarnród Éireann.

#### 4.2.14. **Third party Submissions (2024)**

The overview below sets out the main issues raised in the submissions. All written observations have been read and taken into account in the preparation of this report. The submissions, and associated appendices, are on file for consideration by the Board.

- Generally, save for Chambers Ireland, IBEC and Sports Ireland submissions, object to the proposed development and call for it to be refused.
- Outdated surveys / data gaps in application in relation to data, modelling and surveys. Doldrum Bay discharge was never modelled. Modelling was not modelled on actual discharge point. Model input data is dated, e.g. river hydraulic flows from 1980s-1990s and dated AER's in respect of WwTPs. Lack of data re protection of shellfish waters and razor clam.
- Combined approach: ABP should have requested a full and comprehensive assessment under the combined approach. Incomplete identification of emissions limits/EQS; no final conclusion on what are the most stringent standards that need to be applied to any consent. If cumulative impact breaches any statutory limits or standards then the Board are precluded from granting permission. Failure to accurately model the discharge for the project.
- WFD Assessment does not fully comply with WFD requirements.
- EIAR Methodology considers it is confusing.
- Cumulative impact: inadequate.
- AA Screening: no scientific reasoning was given for screening out Howth Head SAC/Howth Head Coast SPA. Howth Head SAC should be screened in.
- NIS/AA Assessment: lack of consideration given to in-combination impact of other projects. Findings of the assessment are not complete, precise and definitive. Cites Case C-323/17 - the applicant's approach on AA screening and assessment is unacceptable

- Site is not suitable. Concern regarding proximity to health services. Plant is too big, better to have smaller plants in various locations.
- Material Contravention – proposal will contravene objectives in the Fingal and Meath development plans.
- Traffic impact & assessment – a new TIA is required. Traffic impact exacerbate traffic problems;
- Consultation process is lacking and flawed; the legal responsibility is on ABP to advise of period and availability of new documents not UE or by advising the applicant to do it. Difficulty in finding information on GDD website. New residents in area are unaware of proposed plant.
- Biogas storage risk re flight path.
- WWTP options – clarity required.
- Project description is incomplete.
- Frogs - no assessment carried out.
- Geological faults – EIAR fails to identify faults that aren't major.
- Air pollution smell will affect everyone in the area impact on health and breathing. Noise and smell arising – concern for patients and community at Connolly Hospital, the Children's Hospital and St. Francis Hospice.
- Property devaluation lower reputation of area.
- Significant safety and environmental concerns including (in addition to some referenced above) large-scale disaster, negative impacts on tourism and leisure; visual impact; waste will be brought back in by the tides, destroying good beach.
- Chamber's Ireland: Citing policy, the project should be fast-tracked citing importance for business community, the need for safe disposal and treatment of wastewater and existing capacity constraints.
- IBEC: project is of critical importance to the region in relation to enabling infrastructure, business expansion, population growth, delivery of housing, economic effects and public health.

- Sports Ireland: supports the project: much needed drainage infrastructure.

## 5.0 **Applicant's Response to Submissions**

5.1. The applicant submitted a detailed response to all submissions received in 2022 and 2024, which was received by the Board in October 2024. A further response to the submission from CRR was received in January 2025. These responses are available on the file for the Board's consideration, a summary of which is presented below.

- Previous Submissions: a number of submissions made general statements relating to previous submissions made. The applicant considered that no additional response is considered necessary, as responses to the 2018 submissions were provided to the Board in January 2019.
- No specific dredging licence regime in Ireland. Dumping at Sea permit is required for any disposal of material at sea. The applicant will secure and comply with such licence. A MAC application will be made.
- Outdated surveys and data supporting the application: updated ecology surveys were undertaken in the period after the 2018 EIAR was submitted to the Board in order to inform the updated ecological baseline of the 2023 EIAR Addendum. A new logo was developed for the 2023 application information to differentiate documents.
- Difficulty in understanding Remittal Application; changes to the EIAR and associated planning application documents is clearly marked/indicated.
- Combined Approach: The combined approach does not require the steps and assessment as described by Ms. Joyce Kemper. The EIAR considered the WFD, and all the relevant regulations, the impact of the discharge of treated effluent and the potential discharge of untreated wastewater. Treatment standards for treated wastewater from the proposed WwTP to be discharged into the marine environment were reported on in the Key Wastewater Treatment Standards Report. A WFD Assessment was submitted with the remitted application and concludes that the proposed development is fully compliant with the WFD.

- **WFD Assessment:** The WFD Assessment Report complies with all relevant best practice standards and guidance. All necessary mapping is included. Impact on fish has been considered and the WFD Report determined that there will be no risk to fish with the implementation of mitigation measures. With reference to impacts on the RBSF on water environment, the only relevance of the RBSF to this application is to assess the RBSF cumulatively and in combination with the GDD project.
- **AA Screening:** references the NIS in screening in or out of certain sites based on scientific reasoning. Also refers to the High Court Judgment. Updated baseline data in support of the screening assessment is submitted to ABP. In combination effects are considered in the revised NIS. The Applicant has not sought to screen out on the basis of mitigation measures.
- **Modelling of Other Discharges:** it is still expected that the Doldrum Bay outfall will be decommissioned before the Proposed Project is operational and was therefore not included in the model. There are no proposed overflows on the land-based pipelines or at the proposed WwTP for the proposed project.
- **Discharge Limits and Process Failure;** a total failure of the WwTP cannot occur, and therefore, a resulting discharge of untreated sewage to the marine environment would also not occur. The 'Post-Mitigation Likelihood' for 'Discharge of untreated wastewater during Commissioning and Operational Phase' is 'Very Unlikely'. A risk category that is classified as 'Very Unlikely' is 'not expected to occur'.
- **Marine Water Quality Modelling:** The Report did not identify outfall location 72 as the preferred location; outfall location 66 represents the selected discharge location for the Proposed Project. Referring to Appendix A8.1, a detailed highly resolved hydrodynamic and water quality model was required to assess both the Construction Phase and Operational Phase impacts of the proposed outfall pipeline route (marine section) on the marine environment. The most up-to-date information available at the time that the updated modelling studies were undertaken in 2023 to inform the 2023 application information. With respect to hydromorphological / geomorphological assessment, the applicant considers it would not be appropriate, given confined period of activity, and a

short-term sediment dispersal / transport study was undertaken for the construction activity only. Regarding the tunnel interface, the sediment transport modelling scenario for the proposed outfall pipeline route (marine section) was considered in the 2018 planning application. The issue of accumulated historical pollutants in the bed sediment was considered in the EIAR. The concentrations of DIN parameters are taken from rivers and outfalls that were used in the modelling studies. The limits proposed for the discharge, having regard to the proposed discharge volumes and background concentrations, are sufficient to ensure that the receiving water will meet the requirements of the European Union Environmental Quality Objectives. Modelling for Intestinal Enterococci was undertaken as part of this process. Updated modelling has demonstrated that there will be no impact on designated shellfish water.

- Portmarnock Bathing Waters: The requirements for the bathing water statutory monitoring point have been adhered to.
- Migratory Path of Fish Species: Neither the European eels nor salmon were recorded in surveys. The presence of salmon is of medium importance as a sensitive receptor within the region and was assumed and assessed accordingly within the 2018 EIAR.
- NIS / AA Compliance: applicant is satisfied that the NIS is compliant with AA requirements, including in respect of in-combination effects. The 2023 Revised NIS does not contain contradictory statements.
- Periodic Dredging for Razor Clams: the impact was assessed to be high, but extremely localised through extraction or smothering. However, as this species can vertically migrate within the sediments, the latter would not introduce significant mortality.
- Cumulative impact assessment: the EIAR consider cumulative impacts in respect of recent developments.
- Dublin Airport PFAS Contamination is not considered in the Application or the Addendum, however the possibility of encountering contaminated waste as part of the material to be excavated is considered in the 2018 EIAR. And

outline CEMP. The Applicant is endeavouring to carry out further site investigations on the lands proposed to be excavated, subject to the necessary third-party consents being obtained. This will allow the Applicant gain greater clarity on the nature and volume of material to be excavated that may be impacted by PFAS, such that the draft CEMP as well as the relevant environmental assessments can be updated as required.

- Harbour Porpoise / Cetacean Impacts: the impact to Harbour Porpoise and other marine species was assessed for numerous factors. The inclusion of UV treatment at the proposed WwTP will kill the majority of biological pathogens from the discharge.
- Site selection: setting out the site selection history, the Proposed Project has been the subject of a systematic, authoritative and comprehensive consideration of alternatives. The GDSDS and its outcomes, including the determination that additional wastewater treatment capacity would be required, remain valid.
- Development Plans: The 2023 Addendum Planning Report provides an update to the planning and development policy context. The provisions of the new FDP 2023-2029, continue to support the Proposed Project. Uisce Éireann refer the Board to the provisions of 37G(6) of the Act, if required.
- Railway Crossing: the applicant is willing to accept conditions.
- Traffic Impacts & Construction Traffic Assessment: a road safety audit is not required. Junction upgrades to Junction 8 and 10 have increased the capacity of the junctions. The upgrades were reassessed for the EIAR Addendum. Any increase in traffic resulting from the Lidl development is incorporated into the baseline traffic in the EIAR Addendum.
- Risk of Biogas Storage / Leaks Risk of Dublin Airport Flight Paths: with mitigation, no residual impacts or environmental effects arising.
- Air Quality and Odours / Health Impacts: As part of the 2023 EIAR Addendum, a series of updated model runs were completed to re-verify the results of the odour modelling completed for the 2018 EIAR. There will be no

adverse human health effects from particulate matter or indeed any other aspect of air quality.

- Property Values: communities in the study area may experience some temporary impacts, residual impacts identified in Chapter 6 / 6A are considered to be slight and not significant.
- Lack of consultation: applicant has complied with applicable law, citing various consultations.
- Tourism / Leisure / Community Impacts (Portmarnock Beach): setting out findings of the EIAR, including Addendum that is not likely to have a significant impact on the recreation or tourism facilities within the study area.
- Visual Impact of the Proposed WwTP: updated visual impact assessment was undertaken for the 2023 EIAR Addendum.; no material changes from the 2018 assessment identified.
- Site Selection and Alternatives Considered: details the historic strategy development, strategic environmental appraisal and site selection.
- Socio-Economic Impact: sets out the considerations in the EIAR. With mitigation all potential significant negative impacts will be avoided.
- Engineering Design: a comprehensive design iteration process was undertaken. With respect to indicative design of the WwTP, a design of the three 'most likely' treatment options were considered. The difference in the three options is the amount of treatment tanks required. The (Activated Sludge Plant) ASP option has the most tanks and thus the largest overall footprint and was therefore considered as the 'worst case' to be assessed. The proposed project will be subject to detailed design development.
- Noise Impacts during construction: The max. predicted impact was less than permissible standard at St. Francis' Hospice. The assessment showed that there will be an imperceptible vibration impact on the Hospice. The adopted standards for day and night time works will be met for each element of the micro tunnelling works at Connolly Hospital.



- Marine Pipeline Construction Assessment: there will not be works undertaken simultaneously at either end of the marine outfall. The trapezoidal trench is outlined in the design included in the 2018 planning application has not changed and was fully assessed in the EIAR.
- Embedded Design Measures: are measures incorporated into the design of the Proposed Project.
- Sillogue Nature Development Site: Frog was not recorded in surveys to date. Pre-construction surveys will be undertaken. Outline Conservation Management Plans in respect of badgers and amphibians have been prepared in response to the DAU submission, which can be submitted.
- Outfall Pipeline Alternative: two construction methodologies were considered, in-tunnel or excavated trench. Following extensive investigations, excavated trench was selected. Regarding faults, no faults (major or minor) were identified within the proposed outfall pipeline route (marine section).
- Proposed Project Description: reference is made to proposed biogas storage in the application documentation, including the environmental assessments. With respect to sludge, the management and disposal of wastewater sludge is covered by separate environmental assessments.
- Regarding observation from TII: accepts the intent of suggested conditions, will comply with conditions and will continue to engage with TII.
- Regarding observation from NTA: has liaised with the NTA in relation to the Swords to City Centre BusConnects Scheme during the design development and has liaised with the TII in respect of the MetroLink Project and is committed to continued engagement with the NTA and TII.
- Regarding observation from Meath County Council.: The Addendum Planning Report has considered the provisions of the extant Meath County Development Plan. Clarifies in-combination assessment requirements having regard to the East Meath-North Dublin EirGrid project. With respect to cultural heritage impact, clarifying that the original EIAR documents were available to view online. Noting that mitigation measures will be implemented in full.

- Regarding observations from IAA & DAA: Referring to recommended conditions, the applicant accepts the intent of suggested conditions, including that relating to crane operations. States all tanks at the proposed WwTP and APS sites will be covered to prevent attracting birds during the Operational Phase. Regarding the ERM Public Safety Zones Report – the proposed development does not conflict with a density restriction. Notes traffic management mitigation measures. Regarding the Dublin Airport LAP - the construction of the orbital sewer through these lands will not restrict the future development of lands within Dublin Airport.
- Regarding observation from the HSE: regarding emissions reduction, the applicant refers to mitigation measures in the EIAR. Modal share to reduce vehicle movements and hence emissions is outlined in section 13.5 of the EIAR addendum. A construction traffic management plan will be prepared to minimise traffic impacts. Regarding renewable energy generation sources, the applicant refers to the energy recovery from the sludge process i.e. using the biogas produced from this process to fuel on-site CHP generators to produce electrical and thermal energy. Scope to accommodate solar energy at the WWTP site. Regarding climate resilience, the proposed project is designed to provide resilience by providing capacity to meet the demand based on population forecasts to 2040 and setting our weather-related risks and resilience.
- Regarding observation from the EPA: The applicant welcomes the engagement that is required between the Board and the EPA prior to the grant of any planning permission. The applicant will adhere to the EPA's licence application requirements.
- Regarding observation from the DAU: The Revised NIS takes account of the designation of the North-West Irish Sea candidate SPA. Management Plans in respect of badgers and amphibians can be submitted upon request. Re fen pondweed pre-construction surveys and mitigation measures will be put in place, may involve the translocation of the fen pondweed to a receptacle pond, and MGT Plan.

- CRR & IE: the Applicant will consult with IE and CRR and any requirements from IE will be included in the contract documents.
- The applicant acknowledges those submissions which support the project, e.g. Fingal, South Dublin and Meath County Councils, IBEC, Sport Ireland, Chambers Ireland.

## **6.0 Oral Hearing**

- 6.1. Ms. Joyce Kemper and Ms. McMahon sought an Oral Hearing in their submissions (2022, and 2024 respectively).
- 6.2. An Oral Hearing has previously taken place in respect of this proposal. Both parties contributed to the Oral Hearing. The hearing was held between 20th March 2019 and 2nd April 2019, a total of 6.5 days in all. Six days were devoted to ABP-301098 and the remaining half day concerned the related compulsory purchase order application 301039. All documentation presented at the hearing is on file ABP-301908 and in the Oral Hearing recordings.
- 6.3. Having regard to the content of further information submitted with the application, the content of submissions and the fact that interested parties were afforded two opportunities to make submissions, the applicant's Response to Submissions Report and the 3 no. specialists reports which inter-alia considered concerns raised in submissions, I consider that it is not necessary to re-open the Oral Hearing and I submit that the documentation on file can be readily assessed by way of the written submissions. The Board may decide to re-open the Oral Hearing if it considers it is appropriate to do so.

## **7.0 Planning History**

- 7.1. Section 6.0 of the previous Inspector's Report ABP-301908 deals with planning history, while section 2.0 of Addendum Planning Report sets out updated planning history to October 2023. Appendix A23.1 of the EIAR Addendum sets out a more comprehensive list of relevant planning applications, including where the proposed development site intersects with another project, up to when the further information was submitted. In addition to those projects listed, including the Ringsend WWTP

upgrade which included authorisation of the RBSF, the following are also of relevance (where these proposals transect with the proposed route):

- ABP 319282-24: proposed waste facility at Huntstown and Coldwinters. The proposed orbital route transects the site.
- ABP 318677-23: permitted 110kV underground cable and substation at Fieldstown td. The proposed orbital route transects the site.
- FCC F15A/0609/ABP ref. PL06F.248052: permission extended to Gannon Properties for 5 years, expiring on 28<sup>th</sup> June 2027 for housing development at Belcamp Hall.
- PA06F.302651: permitted, continuation of use of the existing long-term car park. The proposed orbital route transects the site.
- ABP 317831-23: proposed 110 kV electricity circuits, close to the proposed WWTP and intersecting the proposed orbital and outfall routes.
- F24A/0974E: permission granted for undergrounding a section of the Grange-Collinstown 38kV overhead line at Stockhole Lane, Clonsaugh.
- ABP 317121-23: permitted Bus Connects Swords to City Centre bus corridor scheme. The proposed orbital route transects the site.
- ABP 320815-23 / FCC F23A/0636: proposed upgrades to drainage infrastructure and construction of additional drainage infrastructure at Dublin Airport.
- ABP 319422-24: permitted, 400 kV underground cable, intersecting the proposed orbital route at the site of the proposed WWTP.
- ABP 319866-24: proposed offshore windfarm (North Irish Sea Array), associated services – transects proposed outfall route.
- ABP-320164-24: DART railway order. The proposed outfall route transects the site.

## 8.0 Legislative and Policy Context

### 8.1. Introduction

8.1.1. Section 7.0 of the Inspector's Report ABP-301908 deals with legislative and policy context, while Section 3.0 of the Addendum Planning Report, which accompanied the further information received from the applicant, deals with planning policy. I set out relevant **updates and new** legislative and policy provisions since the Inspector's Report ABP-301908 in sections 8.2 – 8.7 of my report.

8.1.2. **Extant** relevant legislative and policy provisions **as per the Inspector's Report** ABP-301908 are referenced below, further detail can be found at section 7.0 of that report.

European
Water Framework Directive 2000/60/EC (WFD)
Urban Wastewater Treatment Directive 91/271/EEC as amended
European Union Bathing Water Directive 2006/7/EC
Marine Strategy Framework Directive 2008/56/EC
UNESCO Dublin Bay Biosphere Reserve
Other European Directives which are relevant in the consideration of the environmental effects of this case relate to air quality and habitats and birds.
National
Urban Wastewater Treatment Regulations (UWWT) (S.I. 254/2001) as amended
European Communities Environmental Objectives (Surface Water) Regulations 2009 (SI 272/2009) as amended
European Communities (Quality of Shellfish Waters) Regulations 2006 (SI 268/2006)
Waste Water Discharge (Authorisation) Regulations 2007 (S.I. 684/2007), as amended
The Bathing Water Regulations (S.I. 79/2008)
Irish Water - Water Services Strategic Plan (2014-2021) – A Plan for the Future of Water Services (WSSP) (under review)

Irish Water - National Wastewater Sludge Management Plan (NWSMP) 2016 (under review)	
<b>Regional</b>	
Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland Regional Assembly area	
Section 5.5 Enabling Infrastructure	A number of water and wastewater projects are ongoing to deliver capacity at a large scale to the metropolitan area and it is critical that the timelines for delivery of these projects are aligned with the phased delivery of strategic development areas in the MASP. These include...the GDD project.
Section 10.2 Sustainable Management of Water	The Greater Dublin Drainage Project aims to provide drainage infrastructure to support the continued development of the Greater Dublin Area. The project aims to provide long term sustainable wastewater drainage and treatment.
RPO 10.10	Support Irish Water and the relevant local authorities in the Region to eliminate untreated discharges from settlements in the short term, while planning strategically for long term growth in tandem with Project Ireland 2040 and in increasing compliance with the requirements of the Urban Waste Water Treatment Directive...
RPO 10.11	EMRA supports the delivery of the waste water infrastructure set out in Table 10.2, subject to appropriate environmental assessment and the planning process.
Greater Dublin Strategic Drainage Study (GDSDS), 2005	
Strategic Environmental Assessment (SEA) 2008 of the GDSDS	
<b>County / Local</b>	
N/A, see section 8.4 and 8.5 below. There are new Development Plans in place. The four local area plans referenced by the Inspector ABP-301908 are expired (see below).	

## 8.2. European Policy Context

The following subsections deals with relevant updated and new legislative and policy provisions since the Inspector's Report relating to ABP-301908 was drafted.

### 8.2.1. **Urban Waste Water Treatment Directive (recast)**

8.2.2. The Recast Directive brings in changes to increase the standard of wastewater treatment required across the EU and support the transition towards a circular economy and energy neutrality by 2040. The Directive came into force on 1<sup>st</sup> January 2025, and Member States have until 31<sup>st</sup> July 2027 to transpose it into national law and will require quaternary treatment of treatment plants of equal to or greater than 1,000 p.e. This Directive will eventually replace Directive 91/271/EEC.

### 8.3. **National Policy Context**

The following subsections deals with relevant updated and new legislative and policy provisions since the Inspector's Report relating to ABP-301908 was prepared.

#### 8.3.1. **National Planning Framework (NPF) First Revision, April 2025**

8.3.2. The delivery of critical strategic infrastructure of, inter-alia, water services management is recognised as essential to the sustainable growth of Dublin into the future. Enhanced wastewater capacity through the GDD project is stated to be a key priority. One of several key future growth enablers for Dublin is:

- Ensuring that key water supply and waste-water projects needed to support long term growth within the metropolitan area are delivered, including the GDD Project and Eastern and Midlands Water Supply Project.

National Strategic Outcome 9 relates to sustainable management of environmental resources and refers to the objectives of the Water Services Policy Statement 2018-2025 and the National Waste Management Plans i.e.:

- Bringing and maintaining public water and wastewater services to acceptable international benchmarks, verified by independent monitoring and reporting.
- Implement the GDSDS, through enlarging capacity in existing wastewater treatment plants (Ringsend) and providing a new treatment plant in North County Dublin – known as the Greater Dublin Drainage (GDD) Project.
- Biological treatment and increased uptake in anaerobic digestion with safe outlets for bio stabilised residual waste.

**8.3.3. National Development Plan (NDP) 2021-2030.**

8.3.4. The NDP (undergoing review) sets out investment priorities underpinning the implementation of the NPF. NSO 9 – Sustainable Management of Water and other Environmental Resources – of the NPF is given over to Chapter 14 in its entirety. A list of strategic investment priorities relating to water quality is set out, one of these is to deliver significant infrastructure development projects such as the GDD project. The importance of the project is further highlighted in Box 14.2.2 dedicated to the GDD project, where it was given an estimated cost category and an estimated completion date of 2029. The project is considered to be vital for residential and commercial development across north Dublin and south Fingal.

**8.3.5. Water Services Policy Statement 2024-2030, Government of Ireland**

8.3.6. The policy objectives and priorities set out in this Policy Statement will be reflected in Uisce Éireann's Strategic Funding Plan. The Statement recognises increasing commercial and industrial activity in the Greater Dublin Area is driving a demand for water and wastewater services that is approaching maximum available operational capacity. The continued provision of wastewater capacity, particularly in the major population centres, is required to support housing and economic development in line with growth priorities set out in the NPF. Central to this will be the completion of the GDD Project.

**8.3.7. Uisce Éireann Strategic Funding Plan 2025-2029**

8.3.8. One of the key challenges currently facing UE is listed as 'increasing network and treatment capacity particularly in the Greater Dublin Area'. it states: The GDD project will develop a new regional wastewater treatment facility and associated infrastructure to serve Dublin and parts of the surrounding counties of Kildare and Meath. GDD represents the next major step in the development of the wastewater treatment infrastructure in greater Dublin, recognising its continued growth. GDD will provide capacity to treat wastewater for up to half a million people in north county Dublin and parts of Kildare and Meath.

8.3.9. Regarding capital expenditure, the plan states: In the period 2025-2029 €1.9bn of the total capital expenditure relates to the two national strategic projects; the Water



Supply Project – Eastern and Midlands Region and the GDD project that are expected to be delivered beyond this planning horizon.

8.3.10. The GDD project and the National Wastewater Sludge Management Plan are identified as key mitigants in respect of managing risks to the plan, specifically security of supply and service delivery.

8.3.11. **Uisce Éireann Capital Investment Plan 2020-2024**

8.3.12. This plan focuses on enhancing drinking water quality, reducing leakage, upgrading wastewater treatment, and supporting economic development. The proposed GDD project is listed as a strategic and significant project for which funding has been mandated.

8.3.13. **Uisce Éireann Draft Water Services Strategic Plan (WSSP) 2050**

8.3.14. As with the current Water Services Strategic Plan (refer to Inspector's Report ABP-301908) the strategic importance of the GDD project is restated in the draft WSSP and is referenced as a case study.

8.3.15. **The Water Action Plan 2024: A River Basin Management Plan for Ireland**

8.3.16. This is a national plan that aims to protect and restore good water quality in our rivers, lakes, estuaries, groundwater and coastal waters and is produced in the implementation of the WFD. Urban wastewater discharges is one of the three dominant pressures for Ireland together with agriculture and pressures on hydromorphology, it is a stated measure to address this pressure. Identified actions (in relation to urban wastewater include continued investment in ww infrastructure, and delivery of identified projects (UWW 2). Appendix 6 of the WAP lists those projects identified under action UWW2. The GDD project is listed for completion post 2029. It is a policy to ensure continued compliance with the UWWTD as agglomeration populations grow.

8.3.17. To ensure our water resources remain resilient to the effects of climate change, they will also require investment. Supported through the NDP, Ireland is currently providing an investment of approximately €12 billion in public water and wastewater infrastructure over a ten-year period up to 2027.

#### 8.3.18. **Climate Action Plan 2025 & 2024**

8.3.19. The Climate Action Plan 2025 (CAP25) is the third annual update to Ireland's Climate Action Plan. The purpose of the Climate Action Plan is to lay out a roadmap of actions which will ultimately lead to meeting our national climate objective of pursuing and achieving, by no later than the end of the year 2050 (as committed to in the Climate Action and Low Carbon Development Act 2015, as amended), the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy.

8.3.20. The accompanying Annex of Actions contains a number of themes, which include built environment and industry with actions to reduce carbon in construction materials for all new building and to reduce industry fossil fuel demand through energy efficient measures. It is an action to improve the resilience of Ireland's water infrastructure through implementation of a Nature Based Solutions (NBS) Programme. With respect to climate adaptation, it is an action to develop adaptation plans for water quality and water services infrastructure. CAP 2025 should be read in conjunction with the Climate Action Plan 2024 (CAP24) in particular CAP24 legacy actions as detailed in CAP25.

#### 8.3.21. **National Adaptation Framework (NAF) - Planning for a Climate Resilient Ireland 2024**

8.3.22. The NAF emphasises the importance of integrating adaptation strategies into all levels of policy making, infrastructure development, and local planning. Calls for ensuring that climate adaptation becomes a central consideration in decision-making processes, resource allocation and regulatory frameworks. One of the actions towards the overall goal of the adaptation plan for both water quality and water services infrastructure sectors is to improve treatment capacity and network functions for water service infrastructure.

#### 8.3.23. **National Marine Planning Framework (NMPF)**

8.3.24. The NMPF lists a total of 14 sectors / activities, and correspondingly, sectoral marine planning policies (SMPPs) are provided for these specific marine activities. Those that are regarded as being of direct relevance to the Proposed Project, are 'Wastewater Treatment and Disposal'. Wastewater Treatment and Disposal Policy 1

and Policy 2 are relevant and in summary support proposals by Irish water related to the treatment and disposal of wastewater provided they fully meet the environmental safeguards in the authorisation process.

**8.3.25. Maritime Area Planning Act, 2021 (as amended)**

8.3.26. This legislation underpins the NMPF and puts in place a comprehensive and coherent planning system for the entire Maritime Area including a forward planning regime for the maritime area; a new streamlined development management system and the establishment of a new agency, MARA, to manage the occupation of the maritime area and to enforce the provisions of the new regime. It is noted that the application was lodged as a SID planning application with the Board before this legislation was enacted and falls to be considered under the SID regime.

**8.3.27. A National Waste Management Plan for a Circular Economy 2024 – 2030**

8.3.28. This Plan has been prepared to support and supplement the wider policy base and includes specific targets, policies and actions to enable the waste and resource sector to meet the circularity challenge and accelerate the transition to a circular economy. It includes Waste Facility Siting Guidance (Supporting Documentation) in relation to facilities, including biological treatment facilities, which includes anaerobic digestors and other bio-processes.

**8.3.29. A Waste Action Plan for a Circular Economy – Ireland's National Waste Policy 2020-2025**

8.3.30. The plan shifts focus away from waste disposal and looks instead to how resources can be preserved by creating a circular economy (i.e., a macro perspective of holistic zero-waste resource management), and as with the European Green Deal, encompasses a range of actions supporting circularity and sustainability. One of the objectives is to harness the reach and influence of all sectors including the voluntary sector, R&D, producers / manufacturers, regulatory bodies, civic society.

**8.3.31. National Biodiversity Action Plan 2023 – 2030 (NBAP)**

Ireland's 4th NBAP sets the biodiversity agenda for the period 2023 – 2030. The NBAP has a list of Objectives which promotes biodiversity as follows, Objective 1

Adopt a whole of government, whole of society approach to biodiversity; Objective 2 Meet urgent conservation and restoration needs; Objective 3 Secure nature's contribution to people; Objective 4 Enhance the evidence base for action on biodiversity; Objective 5 Strengthen Ireland's contribution to international biodiversity initiatives. Objective 2 includes that protection and restoration measures detailed in Ireland's third RBMP are implemented to ensure that our natural waters are sustainably managed, that freshwater resources are protected so that there is no further deterioration; and where required, Ireland's rivers, lakes and coastal water bodies are restored to at least good ecological status and that Ireland is meeting all requirements for its transitional, coastal, and marine environment under the Water Framework Directive (WFD) and the Marine Strategy Framework Directive (MSFD), thereby achieving and maintaining High or Good Ecological Status and Good Environmental Status, respectively.

#### 8.4. Local Policy – Development Plans

The following subsections deal with relevant updated and new legislative and policy provisions since the Inspector's Report ABP-301908 was drafted.

##### 8.4.1. Fingal Development Plan (FDP) 2023-2029

8.4.2. A new FDP 2003-2029 came into effect in April 2023 and it replaced the FDP 2017-2023 (2017 FDP).

8.4.3. Chapter 11 deals with **infrastructure and utilities**. It is acknowledged that Fingal and the wider Greater Dublin Area faces a variety of infrastructural challenges, it also recognises the opportunities for Fingal to meet the increased demand for high quality infrastructure and services in the area, such as the upgrading of the Ringsend Wastewater Treatment plant and the GDD project is acknowledged as being another critical piece of national infrastructure and will secure the long term sustainable growth of Fingal and the Greater Dublin Area. The plan states that the GDD project will assist Fingal County Council in delivering on its ambitious plans and in supporting the consolidation of the metropolitan area, sustainable population growth, economic prosperity and continued confidence for investors in the long term. Summaries of relevant policies and objectives include:

- Policy IUP1 – Uisce Éireann-Water Services Infrastructure: Support Uisce Éireann’s strategic water service projects and infrastructure improvements...
- Policy IUP3 – Regional Wastewater Treatment Plant: Facilitate the provision of appropriately sized and located wastewater treatment plants and networks including a new Regional Wastewater Treatment Plant and the implementation of other recommendations of the GDSDS, in conjunction with relevant stakeholders and services providers, to facilitate development in the County and Region and to protect the water quality of Fingal’s coastal and inland waters through the provision of adequate treatment of wastewater.
- Policy IUP4 – Uisce Éireann – Water Service Project – Support the delivery of water services projects in the County which includes the GDD project, table 11.1 refers.
- Policy IUP5: - Greater Dublin Drainage Study: Promote and support the implementation of the Greater Dublin Strategic Drainage Study, Dublin Region Local Authorities (2005) GDSDS, including any updates to the original report.
- Objective IUO6 and Objective IUO7 – requires buffer zones around Wastewater Treatment Plants and pumping stations.
- Policy IUP8 – supports the provision of key enabling infrastructure.
- Policy IUP9 – Sludge Management Plan: have regard to Uisce Éireann’s National WW Sludge Management Plan, support associated energy extraction and other resources from sludge.
- Section 11.5.3 deals with the water quality of waterbodies. Policy IUP19 requires protection of Fingal’s beaches. Objective IUO25 requires consideration of the River Basin Management Plan when considering development proposals. Objective IUO26 sets out requirements of buffer strips along watercourses.

8.4.4. Chapter 9 deals with **green infrastructure and natural heritage**. Summaries of relevant policies and objectives include:

- Policy GINHP2 – Protect areas and networks of Green Infrastructure.

- Policy GINHP5 – Green Infrastructure Network. Develop the green infrastructure network to ensure the conservation and enhancement of biodiversity, including the protection of European Sites.
- Objective GINHO4 – Green Infrastructure and Development. Resist development that would fragment or prejudice the County’s strategic green infrastructure network.
- Policy GINHP7 – Protect and enhance the County’s watercourses, flood plains, riparian corridors, wetlands and coastal area.
- Objective GINHO12 – Green Infrastructure. Ensure the provision of new green infrastructure addresses the requirements of functional flood storage, the sustainable management of coastal erosion, and links with provision for biodiversity, Sustainable Drainage Systems (SuDS) and provision for parks and open space wherever possible and appropriate.
- Objective GINHO15 – SuDS – integrate SuDS into all new development.
- Policy GINHP8, Objective GINHO17 and Objective GINHO18 relate to protection of the landscape, heritage and implementation of Fingal Heritage Plan.
- Policy GINHP11, Policy GINHP12, Objective GINHO27, Objective GINHO28, Policy GINHP17, Policy GINHP18, Objective GINHO32 relate to natural heritage, and support the implementation of relevant Biodiversity Action Plans, protect designated sites, achieve favourable conservation status for the habitats and species in Fingal, species protection and controlling invasive species.
- Policy GINHP19 – Ecological Buffer Zones: Seek to protect the functions of the ecological buffer zones and ensure proposals for development have no significant adverse impact on the habitats and species of interest located therein.
- Objective GINHO37 – Nature Development Areas. Maintain and/or enhance the biodiversity of the Nature Development Areas indicated on the Green Infrastructure maps.

- Objective GINHO41 – protect watercourses.
- Objective GINHO51 – protect designated Shellfish Waters.
- With respect to the protection of landscape, Policy GINHP25 and Objective GINHO59 are relevant.
- Objective GINHO77; comply with the National Marine Planning Framework.
- Objective GINHO81 and Objective GINHO82, protect beaches and bathing areas.
- Policy GINHP33, support the work of the Dublin Bay Biosphere Partnership.
- Sheet 13...indicates trees, woodlands and hedgerows to be protected close to Connolly Hospital, and in the National Sports Campus
- Sheet 14 Green Infrastructure Maps show Nature Development Areas (NDAs) to the west, south and east of Connolly Hospital and one to the north of the NCT centre and another at Portmarnock Golf club. They have been selected for their existing or potential value for wildlife. The land at the Portmarnock Golf Club is within an identified area of coastline vulnerable to erosion. An Ecological Buffer Zone is located at Maynetown/Baldoyle.
- **Greenbelt** Policies and Objectives: CSP44, SPQHP49, SPQHP58, Objective SPQHO101, Objective SPQHO102.

8.4.5. Chapter 2 sets out the core strategy for the Fingal and deals with, amongst other issues, the **development of Portmarnock**. Objective CSO66 Mitigation Measures is relevant as it is an objective to ensure that the mitigation measures as set out in the Portmarnock South and Baldoyle Stapolin LAPs (and other LAPs as necessary) will continue to be implemented and managed in accordance with the requirements of the LAPs or where a LAP is no longer in place, in accordance with a list of stated measures. The objective then sets out a list of measures and more detailed objectives under the heading 'Portmarnock South Area' and include, for example, matters relating to maintaining the ecological buffer zone and the establishment of a 'quiet zone' for Brent Geese and wader species. The entirety of this objective comprises 56 no. (sub)objectives.

- 8.4.6. Chapter 5 deals with **climate action**. Policy CAP 13 supports the production of energy from renewable sources. Policy CAP25 supports the shift towards a circular economy.
- 8.4.7. Chapter 6 deals with **connectivity and movement** while Sheet 17 indicates connectivity and movement objectives. Sheet 17 indicates a road proposal to the south of the proposed WWTP at Clonsbaugh with connection to the south via the R139. A road proposal and GDA cycle network is indicated along Stockhole Lane to the west of the proposed WWTP. An indicative route for Metrolink crosses the proposed orbital route at Ballymun. A light rail corridor traverses the proposed orbital route at Merryfalls and follows the route of the orbital sewer at Cappogue. A proposed road objective traverses the proposed orbital route at Kildonan.

Table 6.3 provide a list of FCC's transportation schemes proposals and include:

- Stockhole Lane Upgrade
- East–West Distributor Road: Malahide Road to Stockhole Lane
- East West Distributor Road: Stockhole Lane to Cherryhound

- 8.4.8. Chapter 8 deals with **Dublin Airport**. Summaries of relevant policies and objectives include:

- The site of the WwTP / SHC lies partly within the Airport Safety Zones (Inner and Outer).
- Objective DAO18 - Promote appropriate land use patterns in the vicinity of the flight paths.
- Objective DAO19 - Support the review of Public Safety Zones associated with Dublin Airport and implement public safety zone policy.

- 8.4.9. Chapter 13 deals with **land use zoning**. The Project lies within or adjacent to lands with the following zoning objectives:

- High Amenity: Protect and enhance high amenity areas
- Open Space: Preserve and provide for open space and recreational amenities
- Community Infrastructure: Provide for and protect civic, religious, community, education, health care and social infrastructure.



- National Sports Campus: provide for and facilitate the development of a National Sports Campus.
- General Employment: Provide opportunities for general enterprise and employment.
- Heavy Industry: Provide for heavy industry.
- Warehousing and distribution: Provide for distribution, warehouse, storage and logistics facilities which require good access to a major road network within a good quality environment.
- High Technology: Provide for office, research and development and high technology/high technology manufacturing type employment in a high quality built and landscaped environment.
- Dublin Airport: Ensure the efficient and effective operation and development of the airport in accordance with an approved Local Area Plan.
- Green Belt (GB): Protect and provide for greenbelt.
- Rural Village: Protect and promote the character of the Rural Village and promote a vibrant community in accordance with an approved land use plan, and the availability of physical and community infrastructure.

8.4.10. The proposed APS is located on lands zoned 'National Sports Campus'. The proposed WwTP and SHC are located on lands zoned as 'green belt', 'high technology' and 'open space'. The proposed access road to the proposed WwTP and the SHC traverses lands zoned for 'open space' and 'high technology' uses.

8.4.11. The proposed OCU is located in Dubber, on lands zoned for 'general employment' use.

8.4.12. The Land Use Classes Technical Guidance - Appendix 7 - defines a 'Utility Installation' as a structure composed of one or more pieces of equipment connected to or part of a structure and/ or a facility designed to provide a public utility service such as the provision of heat, electricity, telecommunications, water or sewage disposal and/or treatment.

8.4.13. Waste Disposal/ Recovery Facility (High Impact), such uses are defined within the FDP 2023-2039 as comprising "The use of land or buildings for facilities with high

potential for odour, noise, dust and other nuisances including putrescible waste. Examples of high impact facilities are transfer stations and treatment plants for organic waste and residual waste which have a potential for odour, crushing and processing of construction and demolition waste, and facilities where waste is stored outside of buildings and which is visually intrusive or otherwise likely to be a nuisance, including scrapyards. Excludes landfills”.

#### 8.4.14. **Dublin City Development Plan (DCDP) 2022-2028**

8.4.15. Amongst the core challenges identified, is the need “to address existing pressure on the city’s water supply and wastewater treatment infrastructure...” Section 9.5 outlines the provisions in relation to wastewater, noting that: “the water supply and wastewater needs of Dublin are to be met by a series of planned Strategic Water Services Projects designed to enhance the city’s water supply and increase wastewater treatment capacity in compliance with the Urban Waste Water Treatment and Drinking Water Directives. The phased upgrade of the Ringsend WWTP Project and Greater Dublin Drainage Project remain critical waste water infrastructure investment priorities in the short-to-medium term”. Appendix 10 (Infrastructure Capacity Assessment) of the new DCDP , notes that the Ringsend upgrade and the proposed GDD projects are intended to provide adequate wastewater treatment to serve the GDA to 2050.

8.4.16. Supporting polices include:

- SI1: support and facilitate Irish Water in the provision of inter-alia wastewater services to meet the future needs of the city and the Region.’
- SI01 Commitment to Working in Partnership with Irish Water in delivering public water services.

8.4.17. The proposed access to the WwTP is via the R139 on DCC lands which are identified as Z14 Strategic Development and Regeneration Area (SDRA) – Clongriffin/Belmayne and Environs, the objective of which is to seek the social, economic and physical development and/or regeneration of an area with mixed-use, of which residential would be the predominant use. The north fringe sewer proposed diversion will follow the route of the proposed accessed to the WwTP. Guiding principles on the future development of this area are set out in section 13.3 of the

DCDP and relate to urban structure, land use and activity, height, design and green infrastructure, an indicative map of the SDRa accompanies the DCDP and indicates access and permeability linkages through the lands to the north into the proposed development site and across the River Mayne.

#### 8.4.18. **Meath County Development Plan 2021-2027**

8.4.19. While no part of the proposed development is located in County Meath, the MCDP notes that the proposed development 'will serve the Meath towns of Dunboyne, Ashbourne and Ratoath and the villages of Clonee and Kilbride'. The following are relevant:

- INF OBJ 1 'It is an objective of the Council to ... promote the sustainable development of water supply and drainage infrastructure ... the region, in accordance with ... the Greater Dublin Drainage Study and Irish Water's Water Services Strategic Plan.'
- INF POL 11 'It is the policy of the Council to ... work in conjunction with Irish Water ... in the provision, upgrading or extension of wastewater collection and treatment systems ...'.

#### 8.4.20. **Kildare County Development Plan 2023-2029**

8.4.21. While no part of the proposed development is located in County Kildare, the KCDP states that it will continue to be a policy of the Council to support Irish Water and their role in relation to water supply and wastewater treatment. It is a policy to support Irish Water to ensure adequate and appropriate wastewater treatment infrastructure is available over the Plan period to service the projected growth of towns and villages throughout Kildare, policy IN P3 refers.

### 8.5. **Local Area Plans**

8.5.1. The Board will note that the Inspector's Report ABP-301908 references local area plans; the Portmarnock South LAP 2013, extended to July 2023, the Dardistown LAP 2012, extended to November 2022 and the Clongriffin – Belmayne LAP 2012, extended to December 2022. The Board will also note that these LAPs have now expired. The relevant LAP for Dublin Airport is the Dublin Airport LAP 2020.

**8.5.2. Dublin Airport Local Area Plan 2020, as extended**

8.5.3. Part of the proposed orbital route passes through lands zoned 'Dublin Airport' and on the LAP lands. Section 9.4.1 (Foul Drainage) highlights that multiple projects are currently being progressed by Irish Water to deliver the infrastructure and capacity necessary for predicted population growth within the Dublin Region. The growth of Dublin Airport will be subject to the progress of the various improvement works and subject to the agreement of Irish Water. Planning consent will be dependent on capacity within wastewater treatment infrastructure. In particular, the GDD project is identified as a key project to Dublin Airport.

**8.6. Fingal County Council Climate Action Plan 2024 – 2029**

Relevant targets include:

- to make Dublin a climate resilient region, by reducing the impacts of future climate change-related events;
- 51% reduction in the Council's greenhouse gas emissions by 2030.

**8.7. Fingal Biodiversity Action Plan (BAP) 2023 -2030**

8.7.1. The Fingal BAP describes character areas where Natura Development Areas are identified such as farmland, quarries, parklands etc, attributing habitats and target species to this character types. Includes Appendix XII, Planning Guidelines Ecological Network – Nature Development Areas and Corridors which relates to retention of natural features, and Appendix XIII, Planning Requirements – Nature Development Areas which relates to management plans.

**8.8. Natural Heritage Designations**

8.8.1. The project traverses four European sites as follows, one of which, the North-West Irish Sea cSPA was designated in 2024:

- Baldoyle Bay SAC – the outfall pipeline (marine section) passes under this site and construction compounds adjoin the site. The pipeline commences close to the R106 at the point of the tunnel launch shaft and is routed in a north-easterly direction terminating northeast of Ireland's Eye. It crosses

under the SAC to a point 600m offshore where it exits the tunnel and continues in an easterly direction.

- Baldoye Bay SPA – as above
- Rockabill to Dalkey Island SAC – 1300m of outfall pipeline and the marine diffuser are within this site. The same 1,300m section lies north of Ireland's Eye SPA and SAC and south of Lambay Island SAC.
- North-West Irish Sea cSPA - The length of the marine-based outfall pipeline beyond Velvet Strand to the terminal marine diffuser (4,800m) is located within the North-West Irish Sea cSPA.

Further descriptions of the proposed development and its location relative to European sites are provided in the Appropriate Assessment section of this Addendum report.

## **9.0 Planning Assessment**

### **9.1. Introduction**

9.1.1. Having regard to the further information, in particular the EIAR Addendum, the Addendums to the Planning Report, Engineering Design Report and Outline CEMP, the revised Flood Risk Assessment, the WFD Assessment, the submissions received, updated policy, new FDP 2023-2023 and the overall development proposal, I consider that the key assessment issues in respect of this Inspector's Addendum Report may be considered under the following headings:

- Overarching Planning Policy
- Need and Capacity of the Proposed Development
- Zoning Policy
- Ecological Buffers
- Quiet Zone
- Safeguarding Dublin Airport
- Adjoining Land Use Zoning

- Site Layout
- Marine Water Quality / Combined Approach and WFD Assessment
- Roads, Traffic and Infrastructure
- Flood Risk
- The Board's Climate Duties

9.1.2. There are issues which are common to both the planning assessment and the environmental impact assessment and in order to avoid repetition these are not repeated in subsequent sections of the report.

## 9.2. **Overarching Planning Policy**

### 9.2.1. **Legislative and Policy Overview**

9.2.2. As set out above in section 8.0 of this report, Legislative & Policy Context, the policy landscape has evolved since the GDD project application was first lodged with An Bord Pleanála. The European and national legislative context largely remains as it was in 2018 and provides the supporting framework for the proposed development, such as the Water Framework Directive, Urban Wastewater Treatment Directive, Urban Wastewater Treatment Regulations, European Communities Environmental Objectives (Surface Water) Regulations 2009 and the Waste Water Discharge (Authorisation) Regulations 2007. Other directives of relevance include the European Union Bathing Water Directive, Bathing Water Regulations, Habitats Directive, Marine Strategy Framework Directive, the UNESCO biosphere designation and the revised Urban Wastewater Treatment Directive.

9.2.3. The Board will note that the recast Urban Waste Water Treatment Directive (which I consider at section 8.2.1 of this Report) is yet to be transposed.

9.2.4. In terms of policy, the **National Planning Framework First Revision** (April 2025), in particular National Strategic Outcome 9 (refer to section 8.3 above) remains relevant as it calls for implementation of the **Greater Dublin Strategic Drainage Study (GDSDS)** through increasing capacity in the Ringsend WWTP and through provision of the GDD project. The **National Development Plan 2021-2030** identifies the proposed project as vital for residential and commercial development across north

Dublin and south Fingal as adequate wastewater infrastructure is needed to support this development. The NDP states that the project will also alleviate pressure within the existing wider wastewater network and help to ensure that the wastewater generated is treated safely, in compliance with the EU and national waste water treatment regulations. The Government's **Water Services Policy Statement 2024-2030** recognises that the GDD project is central to the continued provision of wastewater capacity to support housing and economic development. The **Water Action Plan 2024**, Ireland's third river basin management plan, recognises that urban wastewater discharges is a dominant pressure on Ireland's water environment; actions include continued investment in wastewater infrastructure including the delivery of the GDD project. The **RSES** specifically references the GDD project in the context of delivery of drainage infrastructure to support the development of the Greater Dublin Area.

- 9.2.5. Relevant Uisce Éireann supporting documents include the **National Wastewater Sludge Management Plan, 2016-2021** which supports the proposal for regional sludge hub centre and a sludge hub centre in Fingal, as part of the GDD project. It is recommended that advanced digestion is provided to maximise energy recovery and that the design of the site allows for the provision of thermal drying. The **Water Services Strategic Plan** indicates a need for implementation of the GDD notwithstanding the planned Ringsend upgrade. Both the **Strategic Funding Plan 2025-2029** and the **Capital Investment Plan** specifically reference the importance of the GDD project committing funding to same.
- 9.2.6. The **GDSDS** 2005, recommended upgrading of all wastewater treatment plants in the GDA and the construction of a regional wastewater treatment plant in north Dublin and an orbital drainage network to divert some existing catchments from Ringsend. As referenced above, this study remains relevant today as it underpins the specific objective (National Strategic Outcome 9) in the National Planning Framework First Revision relating to the delivery of the GDD project.
- 9.2.7. The proposed production of biosolids at the WwTP and SHC site will contribute to the objectives of the **National Waste Management Plan for a Circular Economy 2024-2030** and **A Waste Action Plan for a Circular Economy 2020 – 2025**.

9.2.8. At a county level, the **Fingal Development Plan 2023-2029** clearly supports water services projects by Uisce Éireann and specifically supports the delivery of the proposed project which is referenced several times in the Plan. Relevant policies include **Policy IUP1, IUP3, IUP4 and IUP5**.

- Policy IUP1 which is to support Uisce Éireann's strategic water service projects and infrastructure improvements.
- Policy IUP3 which is to facilitate the provision of appropriately sized and located wastewater treatment plants and networks including a new Regional Wastewater Treatment Plant and the implementation of other recommendations of the Greater Dublin Strategic Drainage Study, in conjunction with relevant stakeholders and services providers, to facilitate development in the County and Region and to protect the water quality of Fingal's coastal and inland waters through the provision of adequate treatment of wastewater.
- Policy IUP4 which is to support the delivery of water services projects in the County which includes the GDD project.
- Policy IUP5 which is to promote and support the implementation of the Greater Dublin Strategic Drainage Study including any updates to the original report.
- Policy IUP9 which is to support associated energy extraction and other resources from sludge.

9.2.9. Development Plans of **Dublin City Council** (2022-2028) and **Meath County Council** (2021-2027) support the scheme in principle, while the **Kildare County Development Plan 2023-2029** supports the provision of wastewater infrastructure by Uisce Éireann.

9.2.10. There remains strong national, regional and local policy support for development of the GDD project which is evident from the Policy Context section 8.0 above and which references several relevant policy documents. I am satisfied that the policy framework is clear and robust and continues to support the need for the project, in particular the development of a large wastewater treatment plant in north County Dublin which will cater for regional needs across the Greater Dublin Area.



9.2.11. Several submissions object to the development of a single major wastewater treatment plant in favour of several smaller plants. This matter was previously considered in the Inspector's Report ABP-301908 wherein it was stated that the need for the project to be delivered by the construction of a major wastewater treatment plant in North County Dublin is established in the adopted policy framework, which emerged following a range of studies and consultations. I refer the Board to the assessment undertaken in the Inspector's Report ABP-301908, on pages 64-67, which considered the merits of multiple plants as opposed to a single major plant. In summary the GDSDS considered 8 strategic drainage scenarios and included:

- a new WwTP at a suitable site to be selected under a future site assessment process for a new regional WwTP of capacity of 850,000PE;
- 7 no. sub-regional catchment based WwTPs of 40,000PE to 150,000PE;
- A network of 850 community WwTPs of capacity of 1,000PE each, and;
- 15 sub-regional WwTPs of capacity of 20,000PE to 65,000PE.

9.2.12. The Inspector's Report ABP-301908 noted that the scenario of an extensive network of community-based WwTPs with treated effluent orbital pipeline was assessed by Uisce Éireann and deemed to be impractical including in the areas of energy consumption, sludge management and transportation complexities, environmental risks and major negative impacts for air quality, climatic factors, material assets, cultural heritage and landscape. The scale of the proposed WwTP derives from the policy to provide treatment on a regional basis rather than a county by county basis. The earlier Inspector concluded that there are certain advantages associated with a large scale plant including that the highest level of treatment and expertise can be efficiently delivered at a large plant; that a plant of some scale is required to address the range of issues of concern to observers including the requirement for retrofitting in the future from future legislation. She rejected the proximity principle over-rides the advantages of the selected approach. The Inspector considered a network of community scale plants appeared to be a fatally flawed proposal due to the reliance for discharge to small rivers and streams, citing consideration of the WFD. I agree with the Inspector's Report 301908 that it is appropriate that considerable weight be

given to the extensive body of professional input into background studies and which have all pointed in the direction of a single plant to be located in north Dublin.

- 9.2.13. Having reviewed the policy framework, I am satisfied that the GDD project continues to have long-standing and far-reaching policy support. The growth of population, which is envisaged in the hierarchy of adopted and approved spatial planning policies is dependent on a parallel upgrade in provision of services including in the area of wastewater infrastructure. In summary, I am satisfied that the project continues to be clearly supported across national, regional and local levels in the adopted policy framework.

### **9.3. Need and Capacity of the Proposed Development**

- 9.3.1. Chapter 3A of the EIAR Addendum deals with the need for the proposed project. It notes the origins of the proposed project within the GDSDS have not changed, and as such, the GDSDS and its outcomes, including the determination that additional wastewater treatment capacity would be required, remain valid. As part of this Addendum Chapter, the population and load projections have been reviewed using the available 2022 Census summary data, to confirm whether the projections remain valid. The growth rates remain the same as presented in the EIAR in the 2018 planning application. However, the baseline year has changed from 2018 to 2022 which results in minor variations in loading in 2050. This data is further supplemented by the latest 2022 Annual Environmental Reports for the industries located in the catchments of the eight WwTPs examined within the Greater Dublin Area (GDA) while future commercial and institutional loadings continue to be assumed to grow in line with population growth rates.
- 9.3.2. In line with the 2018 planning application, the projected future total treatment capacity requirement in relevant catchments will exceed the combined total installed design capacity between 2031 and 2035 (dependent on actual growth realised), and therefore, additional wastewater treatment capacity is required to cater for these catchments. The predicted future wastewater treatment capacity deficit in the study area will continue to be concentrated on the Ringsend WwTP. As with the previous 2018 planning application, the recommendation that the additional wastewater

treatment required is most effectively provided by the construction of a single new WwTP (i.e. the proposed WwTP element of the proposed project), remains valid.

- 9.3.3. The projected utilisation of the treatment capacity to be provided at the proposed WwTP out to the year 2050 has been reassessed and the updated figures are provided in Table 3.5 of Chapter 3A of the EIAR Addendum – and indicate a total treatment capacity of 482,714 at 2040 and 508,306 at 2050. The treatment capacity that will be provided at the proposed WwTP is determined to remain at 500,000 PE, as outlined in the EIAR in the 2018 planning application.
- 9.3.4. Regarding the SHC, the sludge treatment capacity to be provided under the proposed project is 18,500 tonnes of dry solids (TDS)/annum to provide for a projected 750,000 PE at the design year horizon of 2050. This figure caters for the import of sludge from other municipal WwTPs in Fingal. The ‘biosolid’ end-product produced at the SHC will be transported to the RBSF for seasonal storage. The EIAR Addendum (Chapter 3A) states that as the treatment capacity at the proposed WwTP and the other regional plants contributing to the SHC out to the year 2050 remains unchanged, there are no changes to the required sludge treatment capacity to be provided under the proposed project.
- 9.3.5. Several submissions query the validity of data supporting the application, considering it to be outdated, the capacity and need for the proposed development. The site selection for the proposed WwTP and SHC is questioned.
- 9.3.6. Having regard to Chapter 3 of the EIAR Addendum, which is based on updated census and AER reports and the overarching policy assessment undertaken at section 9.2 of this Inspector’s Addendum Report, I am satisfied that the development continues to be clearly needed for the fulfilment of growth in the Dublin region and implementation of the NPF, regional and county development strategies.
- 9.3.7. Regarding site selection of the proposed WwTP and SHC which is grounded in the GDSDS and the subsequent SEA, this matter was comprehensively addressed in the Inspector’s Report ABP-301908. The proposed amendments to the scheme and the subject of the additional information – being UV treatment and extension of Mayne culvert – do not alter the acceptability of the site as concluded by the previous inspector and the continual support for the GDSDS across national, regional and local policy documents, despite the submissions made by third parties. I

am therefore satisfied that the site of the proposed WwTP and SHC remain valid today.

#### **9.4. Zoning Policy**

9.4.1. In considering the likely consequences of the proposed development for proper planning and sustainable development in the area, the proposed development needs to be assessed having regard to the adopted development plan policy which has been revised since the assessment undertaken by the Inspector in her report (ABP-301908). This section of my report examines the relevant provisions of the FDP 2023-2029 and the DCDP 2022- 2028 as they presently apply to the proposed development under the following headings:

- Zoning Objectives at the Proposed WwTP and SHC Site
- Use Class
- Assessment of Contribution to Zoning Vision
- High Technology Zoning
- Open Space Zoning
- Conclusion of Zoning Assessment at site of proposed WwTP & SHC
- Adjoining Land Use Zoning
- Access to the Proposed WwTP and SHC
- Zoning at the Proposed APS Site
- Zoning at the Proposed OCU Site

#### **9.4.2. Zoning Objectives at the proposed WwTP and SHC Site**

9.4.3. The site of the proposed WwTP and SHC at Clonshaugh is located across three zonings, mainly 'greenbelt', a strip along the southern boundary zoned 'high technology' and an incidental amount (which I estimate is ca. 0.143ha, less than .48% of the WwTP site area) of the Clonshaugh site is zoned 'open space'. In addition, the proposed access road to the WwTP and SHC passes through land that is zoned 'high technology' and 'open space'.

- 9.4.4. The 'greenbelt' zoning and zoning objective remain unchanged from the 2017 FDP to the present development plan. Likewise, the zoning vision remains unchanged. Similarly, the zoning objective and zoning vision remain the same for 'high technology' land use zoning as they were in the previous iteration of the development plan. See Table 9.1 for relevant zoning definitions from the 2017 FDP and the current FDP.

**Table 9.1 Zoning provisions relating to the proposed WwTP and SHC at Clonshaugh**

FDP 2017-2023	FDP 2023 - 2029
<b>Zoning Objective – Greenbelt</b>	
Protect and provide for a Greenbelt	Protect and provide for a Greenbelt.
<b>Zoning Vision - Greenbelt</b>	
Create a rural/urban Greenbelt zone that permanently demarcates the boundary (i) between the rural and urban areas, or (ii) between urban and urban areas. The role of the Greenbelt is to check unrestricted sprawl of urban areas, to prevent coalescence of settlements, to prevent countryside encroachment and to protect the setting of towns and/or villages. The Greenbelt is attractive and multifunctional, serves the needs of both the urban and rural communities, and strengthens the links between urban and rural areas in a sustainable manner. The Greenbelt will provide opportunities for countryside access and for recreation, retain attractive landscapes, improve derelict land within and around towns, secure lands with a nature conservation interest, and retain land in agricultural use. The zoning objective will have the consequence of	Create a rural/urban Greenbelt zone that permanently demarcates the boundary (i) between the rural and urban areas, or (ii) between urban and urban areas. The role of the Greenbelt is to check unrestricted sprawl of urban areas, to prevent coalescence of settlements, to prevent countryside encroachment and to protect the setting of towns and/or villages. The Greenbelt is attractive and multifunctional, serves the needs of both the urban and rural communities, and strengthens the links between urban and rural areas in a sustainable manner. The Greenbelt will provide opportunities for countryside access and for recreation, retain attractive landscapes, improve derelict land within and around towns, secure lands with a nature conservation interest, and retain land in agricultural use. The zoning objective will have the consequence of

achieving the regeneration of undeveloped town areas by ensuring that urban development is directed towards these areas.	achieving the regeneration of undeveloped town areas by ensuring that urban development is directed towards these areas.
<b>Zoning Objective – High Technology</b>	
Provide for office, research and development and high technology/high technology manufacturing type employment in a high quality built and landscaped environment.	Provide for office, research and development and high technology/high technology manufacturing type employment in a high quality built and landscaped environment.
<b>Zoning Vision – High Technology</b>	
Facilitate opportunities for high technology, high technology and advanced manufacturing, major office and research and development based employment within high quality, highly accessible, campus style settings. The HT zoning is aimed at providing a location for high end, high quality, value added businesses and corporate headquarters. An emphasis on exemplar sustainable design and aesthetic quality will be promoted to enhance corporate image and identity.	Facilitate opportunities for high technology, high technology and advanced manufacturing, major office and research and development based employment within high quality, highly accessible, campus style settings. The HT zoning is aimed at providing a location for high end, high-quality, value added businesses and corporate headquarters. An emphasis on exemplar sustainable design and aesthetic quality will be promoted to enhance corporate image and identity.
<b>Zoning Objective – Open Space</b>	
Preserve and provide for open space and recreational amenities.	Preserve and provide for open space and recreational amenities.
<b>Zoning Vision – Open Space</b>	
Provide recreational and amenity resources for urban and rural populations subject to strict development controls. Only community facilities and other recreational uses will be considered and encouraged by the Planning Authority.	Provide recreational and amenity resources for urban and rural populations subject to strict development controls. Only community facilities and other recreational uses will be considered and encouraged by the Planning Authority.

- 9.4.5. The Board will note that the previous 2017 FDP, under the heading ‘Foul Drainage and Wastewater Treatment’ (page 270), specifically references a planned WwTP at Clonsaugh in the context of the GDD project. The 2017 FDP also included Objective WT03 to facilitate the provision of appropriately sized and located waste water treatment plants and networks including a new Regional Wastewater Treatment Plant and the implementation of other recommendations of the GDSDS. This objective is carried through to the FDP 2023-2029 and although specific reference to a plant at Clonsaugh is no longer contained in the FDP, FCC’s commitment to the delivery of the GDD project is referenced several times in the FDP 2023-2029 wherein it is considered a “critical piece of national infrastructure” that “will secure the long term sustainable growth of Fingal and the Greater Dublin Area” section 11.3 of the FDP 2023-2029 refers.
- 9.4.6. **Use Class**
- 9.4.7. The use classes relating to zoning objectives are contained in Chapter 13 of the FDP 2023-2029 and contain specific types of ‘permitted in principle’ and ‘not permitted’ development. Of particular relevance, in light of third party submissions also, are the following use classes: ‘utility installations’ and ‘waste disposal and recovery facility (high impact)’.
- 9.4.8. ‘Utility Installations’ is defined in Appendix 7 of the FDP 2023-2029 as “a structure composed of one or more pieces of equipment connected to or part of a structure and/ or a facility designed to provide a public utility service such as the provision of heat, electricity, telecommunications, water or sewage disposal and/or treatment.”
- 9.4.9. Utility installations are ‘permitted in principle’ on lands zoned ‘High Technology’, and are not referenced in use classes in respect of greenbelt lands and so can be said to be ‘neither permitted in principle’ nor ‘not permitted’ and according to the FDP 2023-2029 (page 478) will be “assessed in terms of their contribution towards the achievement of the Zoning Objective and Zoning Vision and their compliance and consistency with the policies and objectives of the Development Plan” and which I assess in section 9.4.16 below.

9.4.10. The definition of the 'Waste Disposal/Recovery Facility (High Impact)' remains as it was in the 2017 FDP and is set out in Appendix 7 of the FDP 2023-2029. It is defined as:

"The use of land or buildings for facilities with high potential for odour, noise, dust and other nuisances including putrescible waste. Examples of high impact facilities are transfer stations and treatment plants for organic waste and residual waste which have a potential for odour, crushing and processing of construction and demolition waste, and facilities where waste is stored outside of buildings and which is visually intrusive or otherwise likely to be a nuisance, including scrapyards. Excludes landfills."

9.4.11. 'Waste disposal and recovery facility (high impact)' are not permitted on lands zoned for 'greenbelt', 'high technology' or 'open space'.

9.4.12. The waste disposal and recovery facility definition was considered in the Inspector's Report ABP-301908. She noted that "while the SHC will deal with the sludge arising at the site and as such could be considered to be an integral part of the WwTP and fall under the utility definition, it will also cater for sludge from other WwTPs in Fingal and (without mitigation) would have potential for odour. It would not be unreasonable to conclude that the SHC is a Waste Disposal / Recovery Facility (High Impact). However, part of its function is also ancillary to the WwTP proposed at the site".

9.4.13. Third party submissions consider that the SHC given its scale and treatment of sludge from sources other than the WwTP, "cannot be considered as ancillary to the WwTP and as such can be assimilated into the larger project as being also a utility development to sidestep material contravention of zoning". I understand this to mean that the SHC ought to be assessed on its own merits and considered in the context of whether it materially contravenes the zoning and other development plan policies and objectives.

9.4.14. In the first instance, I am satisfied that the proposed WwTP incorporating the SHC is a utility installation as defined in Appendix 7 of the FDP 2023-2039. The WwTP and the SHC are inter-connected and collectively provide a public utility service in relation to sewage disposal and/or treatment from various sources. The definition of utility installations allows for a facility with different components. I draw the Board's attention to the following conclusion of the Inspector's Report ABP-301908 (see



page 56) on the matter, and which I consider remains valid in the context of current policy:

“In view of the relatively small scale of the SHC element of the proposal I recommend that the Board interprets the SHC zoning in the context of the GDD proposal and conclude that the SHC is part of the overall project.”

9.4.15. I have formed the view that the SHC and WwTP collectively form a utility infrastructure, albeit with differing components. In my opinion, it would be artificial to separate them being inter-dependent; one relies on the other for the purposes of treating waste water. I am satisfied therefore that the proposed development is not a waste disposal/recovery facility as defined in the FDP 2023-2029 and reject third party concerns that the SHC ought to be considered as water disposal/recovery facility. I consider the issue the material contravention in the following sections.

#### 9.4.16. **Assessment of Contribution to Zoning Vision**

9.4.17. It is now necessary to assess the proposed development in terms of its contribution towards the achievement of the Greenbelt Zoning Objective and Zoning Vision. The greenbelt zoning objective, to protect and provide for a greenbelt, must be considered in the context of the zoning vision (refer to table 9.1 above).

- In my opinion, it could be argued that the proposed development will help to permanently demarcate the boundary between the rural and urban areas by its proximity to development to the south, the Belcamp substation and the proposed new east/west distributor road which is proposed to the south of the proposed WwTP and the remaining large area of greenbelt zoned lands to the north of the proposed WwTP.
- The proposed development will not militate against the role of the greenbelt which is to check unrestricted sprawl of urban areas. Given the distance of the proposed WwTP site from built-up urban areas, I consider that the proposed development will not militate against the prevention of coalescence of settlements and the protection of setting of towns and/or villages. The proposed development will not, however, prevent countryside encroachment. I note that development is not prohibited in this zoning (see range of development permitted in principle) and so any development would amount to

countryside encroachment. Nonetheless, the proposed development contravenes this section of the 'vision', and could be considered to be a material contravention particularly in the absence of any site-specific objectives or support for the WwTP and SHC at Clonshaugh, and noting that the 2017 FDP included such a locational reference, I consider that the proposed development is a material contravention of the greenbelt zoning having regard to the vision of this zoning within the FDP 2023-2029.

- I consider that the proposed development will serve the needs of both the urban and rural communities and strengthen the links between urban and rural areas in a sustainable manner.
- The proposed development will not provide opportunities for countryside access and recreation nor will it assist in retaining attractive landscapes. It will in my opinion contribute to improving derelict land within and around towns through the availability of necessary infrastructure and will not militate against securing lands with a nature conservation interest. It will not however retain land in agricultural use, and notwithstanding that development is expressly permissible on lands zoned for greenbelt, the associated zoning vision requires that agricultural land is retained.
- The proposed development will contribute towards achieving the regeneration of undeveloped town areas by ensuring that urban development is directed towards these areas by ensuring adequate infrastructure is available to facilitate the proposed development.

9.4.18. Having regard to the foregoing, I am satisfied that the proposed development while it will contribute towards elements of the Greenbelt Zoning Objective and Zoning Vision it will not contribute in the whole towards the achievement of the zoning objective and zoning vision. I consider that the proposed development materially contravenes the FDP 2023-2029 in this regard.

9.4.19. Additionally, the FDP 2023-239 requires that uses which are neither 'Permitted in Principle' nor 'Not Permitted' will also be assessed in terms of their consistency with the policies and objectives of the Development Plan and the following extracts from the FDP 2023-2029 are relevant to greenbelts:

- Policy CSP44 – Greenbelts. It is a policy of FCC to strengthen greenbelt lands by identifying opportunities for infill development and consolidation of existing towns and villages to reduce the need to zone additional greenfield lands and ensure the preservation of strategic greenbelts to avoid coalescence of settlements. Support development within the greenbelts which has a demonstrated need for such a location, and which protects and promotes its permanency.
- Policy SPQHP49 – Preservation of Greenbelts. Recognise the importance of and preserve greenbelts in Fingal in order to safeguard valuable countryside to ensure that existing urban areas within Fingal do not coalesce enabling citizens to enjoy the County's natural amenities and to strengthen and consolidate greenbelts around key settlements.
- Policy SPQHP58 – Preservation of Greenbelts. Preserve Greenbelts in Fingal in order to safeguard valuable countryside; to ensure that existing urban areas within Fingal do not coalesce to ensure that citizens can enjoy the County's natural amenities and to strengthen and consolidate greenbelts around key settlements.
- Objective SPQHO101 – Strengthening of Greenbelt Lands: Strengthen greenbelt lands by identifying opportunities for infill development and consolidation within existing towns to reduce the need to zone additional greenfield lands and ensure the preservation of strategic greenbelts between our towns and villages.
- Objective SPQHO102 – Development within the Greenbelts: Promote development within the Greenbelts which has a demonstrated need for such a location, and which protects and promotes the permanency of the Greenbelt, and the open and rural character of the area.
- Section 3.5.15.12 Fingal's Greenbelts; Ensuring, inter-alia,
  - the identity and unique character of rural and urban areas in the vicinity of administrative boundaries will be maintained where this would be beneficial;

- that citizens can enjoy the visual and natural amenities of the countryside in close proximity to the urban areas in which they reside;
- Proposed development within the Greenbelt shall clearly demonstrate a functional need for such a location, and consistency with the established character of the landscape of the area.

9.4.20. With respect to Policy CSP44 'Greenbelts', I am satisfied that there is a demonstrated need for the proposed development at this location having regard to the infrastructural requirements and overarching policy support for the proposed development and I consider that the proposed development will not militate against the opportunities for infill development as the proposed development is not one that can be easily assimilated into an infill site or one that could contribute to consolidation of an existing town and village given its scale and nature. Notwithstanding that development is not precluded in greenbelt zoned land, the proposed development will not, in my opinion, protect the permanency of the greenbelt for the reasons set out at section 9.4.17 above.

9.4.21. With respect to Policy SPQHP49 'Preservation of Greenbelts', notwithstanding that the proposed WwTP and SHC will not contribute to the coalescence of urban areas, it will also not preserve greenbelts, contribute to citizens enjoyment of the County's natural amenities nor will it consolidate greenbelts around key settlements.

9.4.22. With respect to Policy SPQHP58 'Preservation of Greenbelts', the proposed WwTP and SHC will not preserve greenbelts to safeguard valuable countryside.

9.4.23. With respect to Objective SPQHO101, the proposed development would not militate against the identification of lands for infill development however it will not ensure the preservation of strategic greenbelts between towns and villages.

9.4.24. With respect to Objective SPQHO102, 'Development within the Greenbelts', I am satisfied that the locational need for the proposed development is established (refer to section 9.2 of this Addendum report) the proposed development will not protect and promote the permanency of the greenbelt and the open and rural character of the area.

9.4.25. Section 3.5.15.12 of the FDP deals with Fingal's Greenbelts and is similar to the consideration of the foregoing objectives. In my opinion, the proposed development

can demonstrate to have a functional need for such a location. I consider that the proposed WwTP and SHC is not entirely inconsistent with the established character of the landscape of the area having regard to the proximity to the airport, the Clayton Hotel, the Holiday Inn and Belcamp Substation.

9.4.26. Other development plan objectives (including those raised by third parties) are relevant:

- Objective DMSO198 –Establish a buffer zone of not less than 100m around all wastewater treatment plants. I am satisfied that this has been achieved.
- Objective DMSO199 - Establish a buffer zone of not less than 35-30m around all pumping stations. I am satisfied that this has been achieved.
- Objective IUO26 – Riparian Corridors; Ensure a 10m wide riparian buffer strip either side of all watercourses from new development within designated settlement boundaries and 48m in all other areas. No new development is proposed within 48m of any watercourse save for the orbital route and a culvert. The applicant is proposing trenchless methodologies at watercourse crossing locations of the proposed orbital route and so will be tunnelling underneath the watercourses, in addition a culvert is proposed across the River Mayne (at entrance to proposed WwTP). Figure 17.10 indicates the proposed watercourse crossings, see also table 17.8 of the EIAR. I note that a third party considers that the proposed development would materially contravene this objective. I do not agree that it would and I am satisfied that the proposed construction methodologies will ensure the integrity of riparian corridors.

9.4.27. To summarise, the proposed WwTP and SHC can, in my opinion, be considered collectively a 'utility installation'. This use class is not provided for on lands zoned greenbelt on which the proposed WwTP and SHC is to be located. I was therefore required to assess the contribution of the proposed development towards the achievement of the Zoning Objective and Zoning Vision and their compliance and consistency with the policies and objectives of the FDP 2023-2029. I have concluded that the proposed development will not contribute to the entirety of the zoning objective and zoning vision, in particular, that it will not prevent countryside encroachment or retain land in agricultural use which are expressly provided for in

the zoning vision. In addition, having assessed the relevant policies and objectives of the FDP 2023-2029, I consider that the proposed development is not entirely compliant or consistent with Policy CSP44, Policy SPQHP49, SPQHP58, Objective SPQHO101, Objective SPQHO102 and section 3.5.15.12. Having regard to the foregoing, the broader spirit of the greenbelt zoning, vision, policies and objectives and the fact that the GDD project locational reference to Clonshaugh has been removed in the FDP 2023-2029, I consider, the proposed development represents a material contravention of the greenbelt zoning.

9.4.28. I consider that the proposed development is necessary for the purposes of implementing the FDP 2023-2029 including its growth strategy and environmental protection measures and also for the achievement of the core strategies of other development plans of counties in the area. As such the proposed use would be consistent with the core strategy and infrastructural policies and objectives of the development plan. This is assessed in greater detail in section 9.2 of this Inspector's Addendum Report.

#### 9.4.29. **High Technology Zoning**

9.4.30. With respect to high technology land use zoning, the proposed WwTP and SHC accords with the land use zoning for high technology lands as (and as stated above) utility development is expressly permitted on these lands.

#### 9.4.31. **Open Space Zoning**

9.4.32. With respect to lands zoned 'open space', 'utility installations' are not listed in 'permitted in principle' or 'not permitted' uses classes and so, similar to the assessment of the proposed development on greenbelt zoning, the proposed WwTP and SHC must be assessed in terms of their contribution towards the achievement of the Zoning Objective and Zoning Vision and their compliance and consistency with the policies and objectives of the Development Plan. As stated above (Table 9.1), the objective of open space zoning is to 'preserve and provide for open space and recreational amenities', while the zoning vision is 'to provide recreational and amenity resources for urban and rural populations subject to strict development controls. Only community facilities and other recreational uses will be considered and encouraged by the Planning Authority'.

9.4.33. The proposed WwTP and SHC will not contribute to the achievement of either the zoning objective or zoning vision for lands zoned open space. In my opinion, the proposed development materially contravenes the FDP 2023-2029 having regard, collectively, to the location of proposed access route to the WwTP across lands zoned for open space use together with the small area of open space zoned lands identified as being within the site of the proposed WWTP.

9.4.34. **Conclusion of Zoning Assessment at Site of Proposed WwTP & SHC**

9.4.35. The Board will be aware the matter of material contravention was considered by the Inspector in her report ABP-301908 who considered that the proposed development did not materially contravene the plan. She considered (at page 56) that there was a strong case to be made that notwithstanding the greenbelt zoning objective there was considerable strength in the prevailing policy provisions in favour of the development of the WwTP at the Clonshaugh site – this applies also to the SHC. In her opinion the high-level support in the development plan for the GDD and the specific references to the Clonshaugh site should over-ride any concerns which the Board might have in relation to the greenbelt policy. The Board will note however that the reference to the proposed WwTP at Clonshaugh is not specifically provided for in the FDP 2023-2029. I have assessed the development having regard to consistency with policies and objectives of the FDP 2023-2029 and towards the achievement of zoning objectives and vision. Having regard to the written statement of the FDP 2023-2029, which unlike the 2017 FDP does not include reference to locating the proposed WwTP at Clonshaugh, I conclude that the proposed development would materially contravene the FDP 2023-2029 in respect of greenbelt zoning and open space zoning.

9.4.36. Third party submissions consider that the project contravenes a number of objectives of the FDP (a point made in both 2022 submissions which related to the 2017 FDP and the 2024 submissions which relates to the FDP 2023-2029) in relation to greenbelt and open space zoning. In light of the FDP 2023-2029, I agree with third parties on this point that the proposed development would materially contravene the FDP 2023-2029 in respect of greenbelt zoning and open space zoning.

9.4.37. I note that Section 37G (2) of the Planning and Development Act, 2000, as amended, requires that the Board have regard to the provisions of County

Development Plans in the case of Strategic Infrastructure Development (SID) applications, however, as provided for in Section 37G(6) of the Act, should the Board be minded to grant permission for the development, it may do so even if the proposed development, or part thereof, contravenes materially the development plan relating to any area in which it is proposed to situate the development. In this regard, I draw the Board's attention to the FDP 2023-2029 which specifically supports the delivery of the proposed project in several policies and states that the GDD project is a key wastewater infrastructure investment priority to support the continued development of the Great Dublin Area and aims to provide long-term sustainable wastewater drainage and treatment.

9.4.38. I consider that the proposed development is of strategic importance having regard to the provisions of the National Planning Framework, the Regional Spatial and Economic Strategy, the Water Action Plan, the Government's Water Services Policy Statement. The proposed development will contribute to meeting the objectives of these plans and I confirm that FDP 2023-2029 also supports the proposed development.

9.4.39. **Adjoining Land Use Zoning**

9.4.40. I have reviewed the adjoining land use zonings along the length of the proposed project and I am satisfied that there have been no changes in zoning from the 2017 DFP to the current 2023 FDP which would warrant a reassessment of impact of the proposed development on adjoining land use zoning.

9.4.41. **Access to the proposed WwTP and SHC**

9.4.42. The proposed access to the WWTP is via the R139 on Dublin City Council lands which are identified as Z14 Strategic Development and Regeneration Area (SDRA) – Clongriffin/Belmayne and Environs, the objective, as set out in 14.7.13 in the Dublin City Development Plan 2022-2028 (DCDP). These are areas where proposals for substantial, comprehensive development or redevelopment have been, or are in the process of being, prepared. A number of the Z14 areas relate to important public housing regeneration areas and others relate to former brownfield lands with capacity for significant redevelopment. A number of sites that are zoned Z14 are also identified as Strategic Development Regeneration Areas. Z14 areas are capable of



accommodating significant mixed-use development, of which residential would be the predominant use. Therefore, developments must include proposals for additional physical and social infrastructure/facilities to support same.

9.4.43. Guiding principles on the future development of this area are set out in section 13.3 of the DCDP and relate to urban structure, land use and activity, height, design and green infrastructure, an indicative map of the SDRA accompanies the DCDP and indicates access and permeability linkages through the lands to the north into the proposed development site and across the River Mayne.

9.4.44. Having regard to the foregoing, I am satisfied that the proposed access road to the WwTP, which will alter the access arrangement to Craobh Chiarain GAA, is not contrary to land use zoning objective Z14. Furthermore, it will facilitate access to lands to the north across the River Mayne.

**9.4.45. Zoning at the Proposed APS Site**

9.4.46. For completeness, I consider the zoning provisions at the proposed pumping station at Abbotstown. The APS is proposed to be located on lands zoned as National Sports Campus (NSC), the objective is to 'provide for and facilitate the development of a National Sports Campus'. The stated vision of NSC zoned lands is facilitate the sustainable development of a state-of-the-art NSC incorporating world class indoor and outdoor sporting facilities and recreational amenities for community use, on lands adjacent to major transport infrastructure, operating at a national and international scale and optimising its value as a centre of excellence for sport.

9.4.47. 'Permitted' and 'not permitted' use classes are set out in Chapter 13 of the FDP 2023-2029. Utility installations are not listed in either 'permitted' or 'not permitted' use classes, and so in accordance with FDP 2023-2029 will be assessed in terms of their contribution towards the achievement of the Zoning Objective and Vision and their compliance and consistency with the policies and objectives of the Development Plan.

9.4.48. Having carefully considered the wording of the both the objective and vision of the NSC zoning, I am satisfied that the proposed development will assist in facilitating the development of a NSC through providing drainage infrastructure to support the development of lands in the Greater Dublin Area, including that of the NSC. I

conclude therefore that the proposed development will contribute towards the achievement Zoning Objective and Vision of NSC lands.

- 9.4.49. With respect to compliance and consistency with the policies and objectives of the Development Plan, Objective CIO16 – National Sports Campus Zoning (NSC) is relevant which is to ‘facilitate the provision of sporting facilities and associated infrastructure in accordance with the National Sports Campus zoning (NSC), incorporating appropriate office, administration, training, accommodation and other associated and ancillary development.’
- 9.4.50. I have considered FDP 2023-2029 policies and objectives at section 9.2 of this Addendum Report which directly relate to the provision and support for the development of the GDD project. These are Policy IUP1, IUP3, IUP4 and IUP5. FCC’s commitment to the delivery of the GDD project is referenced several times in the FDP 2023-2029 wherein it is considered a “critical piece of national infrastructure” that “will secure the long term sustainable growth of Fingal and the Greater Dublin Area” section 11.3 of the FDP refers. I am satisfied that the proposed APS on lands zoned NSC is compliant and consistent with the policies and objectives of the Development Plan.
- 9.4.51. The Board will also note the submission from Sport Ireland (received May 2024) which states that this strategically important project will provide much needed drainage infrastructure for developments within the region including sports related development both within the Sport Ireland National Campus and beyond.
- 9.4.52. **Zoning at the Proposed OCU Site**
- 9.4.53. The OCU is proposed to be located on lands zoned as ‘General Employment’, the objective is to ‘provide opportunities for general enterprise and employment’. The stated vision is to facilitate opportunities for compatible industry and general employment uses including appropriate sustainable employment and enterprise uses, logistics and warehousing activity in a good quality physical environment. General Employment areas should be highly accessible, well designed, permeable and legible.
- 9.4.54. ‘Permitted’ and ‘not permitted’ use classes are set out in Chapter 13 of the FDP 2023-2029. In my opinion, the proposed OCU can be considered a utility installation,

and I note that utility installations are listed as a 'permitted' use class. I am satisfied therefore that proposed OCU at Dubber accords with the zoning provision of General Employment.

## **9.5. Ecological Buffer Zones**

- 9.5.1. The Inspector's Report ABP-301908 considered that the development plan policy on ecological buffer zones was of particular relevance. Reference is made to the Portmarnock South Local Area Plan (LAP) which showed the route of the outfall pipeline related to the WwTP site, the construction corridor and a construction compound to the west of the estuary Baldoyle Bay. The construction corridor would traverse lands which are designated as an ecological buffer zone. Reference is made to an objective in the 2017 FDP which sought to protect the functions of ecological buffer zones. The Inspector in her report ABP-301908 concluded that the short-term use of these lands would not contravene the ecological buffer zone subject to it being demonstrated that there is no adverse impact on the integrity of the SAC/SPA. For this reason, I consider it necessary to update the assessment on ecological buffer zones.
- 9.5.2. As stated above, at section 8.5, the Portmarnock South LAP has expired, however Objective CS066 of the FDP 2023 – 2029 which relates to 'mitigation measures' is relevant as it states that mitigation measures as set out in the Portmarnock South LAP will continue to be implemented and managed in accordance with a number of stated habitat mitigation measures and objectives relevant to Portmarnock South Area, where the LAP is no longer in place. Objective GI 7 is to protect and enhance the function of the ecological buffer zone through appropriate mitigation and management measures as set out in Green Infrastructure and Landscape Strategy.
- 9.5.3. Sheet no. 15, Green Infrastructure 2, of the FDP 2023-2029, indicates an Ecological Buffer Zone, at the location of the part of the proposed outfall pipe and proposed compound no. 9 in the townland of Maynetown.
- 9.5.4. Section 9.6.6 of the FDP 2023-2029 deals with Ecological Buffer Zones and states: 'These buffer zones protect the ecological integrity of the nationally and internationally designated sites by providing suitable habitat for key species such as birds, by providing for compatible land-uses around the designated sites, and in the

case of .... estuaries the buffer zones can also provide for recreational uses and are also important for coastal flood protection and for climate change adaptation.

Ecological buffer zones are areas where agricultural uses may be combined with nature conservation and low-intensity recreational use such as walking and cycling.'

9.5.5. It is a policy (Policy GINHP19) to protect the functions of the ecological buffer zones and ensure proposals for development have no significant adverse impact on the habitats and species of interest located therein.

9.5.6. I am satisfied that there are no new provisions in the FDP 2023- 2029 which would alter the original Inspector's policy assessment relating to ecological buffer zones. I concur with the original assessment in the Inspector's Report ABP-301908 that the short-term use of these lands would not contravene the ecological buffer zone subject to it being demonstrated that there is no adverse impact on the integrity of the SAC/SPA.

#### 9.6. **Quiet zone**

9.6.1. The Portmarnock South LAP designated a quiet zone for birds. It was acknowledged in the Inspector's Report ABP-301908 that an area of temporary construction works, compound no. 9, would encroach on the quiet zone. The quiet zone is not mapped in the FDP 2023-2029. The FDP 2023-2029 however notes that where the Portmarnock South LAP is no longer in place that the suite of mitigation measures under Objective CS066 will continue to be implemented prior to the commencement of development. With respect to quiet zones, it states:

'A 'quiet zone' established to the south of the residential development area to cater for Brent Geese and wader species. The 'quiet zone' to consist of grassland pasture. This 'quiet zone' will be enclosed by a fence and hedge to prevent disturbance during the winter migratory bird season. The enclosure must be dog proof but can permit overlooking of the 'quiet zone' e.g. 1.2 metre-high fence with hedge planting of native species.'

9.6.2. I am satisfied that there is no preclusion to temporary construction works on the site arising from the FDP 2023-2029. Some third-party observations raise concerns with regard to impact to Light-bellied Brent Geese in the vicinity of construction compound no. 9. Impact on avian species, in particular Brent Geese and wader

species is further considered in Sections 10.10 and the Appropriate Assessment of this Inspector's Addendum Report.

## **9.7. Nature Development Areas (NDA's)**

- 9.7.1. The proposed development passes through a number of identified NDAs at Portmarnock (golf course), Sillogue, National Sports centre (woodland) and Abbotstown woodlands. NDAs are defined in the FDP 2023-2029 as locations where nature conservation can be combined with existing activities such as farming, forestry, quarrying and recreation (e.g. golf courses) and are considered to be reservoirs of biodiversity. It is an objective (Objective GINHO37 – Nature Development Areas) to maintain and/or enhance the biodiversity of the NDAs indicated on the Green Infrastructure maps and to implement planning guidelines for NDAs as outlined in the Fingal Biodiversity Action Plan 2023-2030.
- 9.7.2. The NAs are the same as they were in the 2017 FDP, and I note the conclusion of Inspector in her Report ABP-301908 in relation to the Sillogue NDA that subject to the relocation of species under licence as necessary and the suitable restoration of the site the NDA objective would not be undermined. The DAU, in their most recent submission, noted that during a site visit by the NPWS in 2022, various plant species occurring in the ponds which were typical of hard-water lake habitats were noted and are considered to be of local importance. I note, however, that updated ecological surveys have been undertaken and inform the EIAR Addendum and revised NIS, and accordingly, sections 10.11 of this Inspector's Addendum Report assess the impact of the proposed development on biodiversity.
- 9.7.3. Having regard to the policies and objectives of the FDP 2023-2029 relating to NDAs I am satisfied that there is no preclusion from the development of NDAs subject to implementation of planning guidelines outlined in the Fingal Biodiversity Action Plan. I have considered the impacts of the proposed development against the provisions and appendices of the Action Plan. I am satisfied the proposed mitigation measures set out the EIAR and EIAR Addendum, including the biodiversity enhancement measures and the additional measures put forward by the DAU and included in the Schedule of conditions, meet the requirements of the Fingal Biodiversity Action Plan and the FDP 2023-2029 in respect of NDAs.

## **9.8. Safeguarding Dublin Airport**

- 9.8.1. Dublin Airport's Public Safety Zones are set out in the FDP 2023-2029, Sheet no. 11 and the Dublin Airport LAP 2020, as extended. The proposed WwTP and SHC at Clonshaugh are located within the Outer Public Safety Zone, while the proposed orbital route and outfall route traverse the Inner Public Safety Zone. Policy provisions remain as they were in the 2017 FDP, which is to restrict development which would give rise to conflicts with aircraft movements on environmental or safety grounds on lands in the vicinity of the Airport and on the main flight paths serving the airport, Objective DA014 refers and; to promote appropriate land use patterns in the vicinity of the flight paths serving the airport, having regard to the precautionary principle, Objective DA018 refers. Objective DA01 and DA02 require safeguarding of the current and future operations of Dublin Airport in line with Government policy and the Dublin Airport LAP. Objective EI03 of the Dublin Airport LAP 2020 states that development proposals shall not prejudice the orderly operation and continued growth of the airport including provision of a third terminal in the future.
- 9.8.2. A number of submissions raise concerns regarding the location of the proposed SHC and associated biogas storage tank within the Public Safety Zone of Dublin Airport would, it is contended, involve significant challenges, risks and material contraventions of the objectives of the FDP 2023-2029.
- 9.8.3. I note the submissions from DAA and the Irish Aviation Authority in 2024 who request that a condition is attached to any grant of permission requiring the developer to agree any subsequent requirement for mitigation measures/wildlife hazard reduction techniques should there be undue bird/wildlife hazards which only become apparent after completion of the proposed development. It also requests a condition regulating crane use. Impact on birds/wildlife hazards is considered in section 10.10 of this report, which relates to ornithology. Regulation of crane use was recommended by the Inspector ABP-301908 and regulation of same remains relevant.
- 9.8.4. DAA further request that the Board have regard to the density recommendation under Table 6.1 of the ERM Report, Public Safety Zones (2005) ensuring the development remains compliant with density restriction for working premises of 110 persons per half hectare during the hours of operation. With regard to traffic and

transport, DAA state that the nature of the proposed development has significant potential to impact on the external road network on which the airport relies, adding the proposed wayleaves could inhibit the future development of airport lands particularly to the east of the R132 and requires that construction traffic plans are agreed with the DAA prior to commencement.

- 9.8.5. The applicant responds by stating that the implementation of the proposed project would not give rise to conflict with the density restrictions prescribed by the ERM Public Safety Zones Report and that it would not be appropriate for any density restriction to be imposed on the proposed project. Having had regard to the density restrictions, I am satisfied that no conflict will arise with regard to density restrictions.
- 9.8.6. Impact on the external road network is assessed in the EIA section below, having regard to the EIAR Addendum. Having regard to the traffic assessments carried out in the 2018 EIAR and updated for the EIAR Addendum I am satisfied that operational phase traffic will have no impact on the external road network surrounding the airport, while construction traffic can be appropriately managed.
- 9.8.7. The DAA raise concerns (in 2024 submission) that the wayleaves could inhibit future development of airport lands. Their 2018 submission called for confirmation that the sewer would be built at sufficient depths to allow road build over in the future to ensure future road access. I concur with the applicant that the construction of the orbital sewer through these lands will not restrict the future development of lands within Dublin Airport and I note that the Dublin Airport LAP states that the growth of Dublin Airport will be subject to the progress of the proposed project, among others.

## 9.9. **Site Layout**

- 9.9.1. There are three site layout plans for the WWTP at Clonsaugh presented for consideration in the application as design options. The options are:
- *Activated Sludge Plant (ASP)*
  - *Sequencing Batch Reactor plant*
  - *Aerated Granular Sludge (AGS) plant*

- 9.9.2. A third-party submission queries if the ASP option has been selected as the preferred option, another submits that there are 3 possible WwTP processes and only one was assessed.
- 9.9.3. The Inspector's Report ABP-301908 acknowledges (on page 68) that the site layout has been determined to account for three possible layouts and that building envelopes would not be altered by changes to the treatment method or standard and the heights including of chimneys are maximum. The plant layout and building envelop allows for future add-ons. For example, it is stated to be capable of provision of thermal drying, the cost of which may not be justified in the early stages but which may be required in the event of a decrease in land availability for biosolids spreading.
- 9.9.4. The applicant, in its Response to Submissions Report, states the difference in the three options is the amount of treatment tanks required, that the ASP option has the most tanks the largest overall footprint and was considered as the 'worst case' to be assessed. As a result, the ASP option was updated on Planning Drawing Numbers 32102902-2127 to 32102902-2126, to account for the inclusion of UV treatment, as part of the further information.
- 9.9.5. Having reviewed the planning documentation as a whole, I am satisfied that the indicative layout presented for assessment is based on the ASP layout and that the EIAR and Addendum assessed the ASP option. In addition, the only detailed drawings presented for consideration in respect of design and layout are those for the ASP option.
- 9.9.6. Should the Board decide to grant permission for the proposed development I accordingly consider it appropriate that a specific condition is attached to the Schedule of Conditions which permits the ASP option unless a further consent alters the permission. This is included in the draft Order below.

9.10. **Marine Water Quality, Combined Approach Assessment and WFD Assessment**

- 9.10.1. This section should be read in conjunction with section 10.15 of the EIA relating to marine water quality.
- 9.10.2. A number of third-party submissions received in 2022 and 2024 raise issues relating to the combined approach assessment and matters relating, including, the



methodology of the assessment undertaken by Uisce Éireann. Other concerns relate to out-of-date data and surveys, paucity of data in identifying statutory limits in relation to the combined approach, failure to accurately model the discharge for the project, lack of data re protection of shellfish waters and razor clam, failure to cumulatively assess discharges and emissions, failure to fully comply with WFD requirements and lack of independent assessment by the EPA.

- 9.10.3. As referenced earlier, the Court found that the Board had failed to correctly identify and comply with the obligation imposed on it by Regulation 44 of the Waste Water Discharge (Authorisation) Regulations, 2007 as amended, to seek the observations of the Environmental Protection Agency on the likely impact of the proposed development on wastewater discharges. Following which the Board sought from the applicant its view on whether the discharge of wastewater from the proposed development, in conjunction with existing discharge to the receiving waters would cause or exacerbate breaches of the combined approach. The EIAR and revised NIS have been updated, including updated modelling and new supporting documents, such as the Water Framework Directive Assessment, and have been submitted to the Board by the applicant.
- 9.10.4. With respect to the combined approach, the applicant addresses this in the Cover Letter which accompanied the further information. To the Board's question as to whether the discharge of wastewater from the proposed development in conjunction with existing discharge to the receiving waters would cause or exasperate breaches of the combined approach the applicant has said 'no'. The applicant states that the EIAR for the proposed project including the EIAR addendum and the environmental assessments completed within have taken full account of all relevant statutory and non-statutory requirements including the Waste Water Discharge (Authorisation) Regulations 2007 (as amended), the Waste Water Treatment Regulations 2001 (as amended), the Water Framework Directive, European Union Environmental Quality Objectives (surface water) Regulations 2009 (as amended) and Bating Water Quality Regulations 2008. These assessments considered the impact of the proposed project in combination with the existing baseline on established environmental objectives as described in all relevant legislation including discharges and emissions to waters.

9.10.5. The applicant states that compliance with the combined approach is demonstrated as follows:

- (a) Urban Wastewater Treatment Directive: As the proposed discharge is not to a designated sensitive area under Article 6 of the Urban Wastewater Treatment Regulations 2001 (as amended) the only concentration limits that apply with the treated effluent discharge are set out in Schedule 1 of these Regulations. The proposed discharge complies with these limits. This is set out in section 4.4.4 of Chapter 4 in volume 2 Part A and further described in the Key Wastewater Treatment Standards Report which is appended as appendix A4.1 in volume 3 Part B of the EIAR in the 2018 planning application.
- (b) Environmental Quality Objectives: the water quality modelling carried out demonstrates that the limits proposed for the discharge, having regard to the proposed discharge volumes and background concentrations, are sufficient to ensure that the receiving water will meet their requirements of the European Union Environmental Quality Objectives Surface Waters Regulations 2009 (as amended), as documented in Chapter 8 in Volume 3 Part A of the EIAR in the 2018 planning application and as stated in section 8.6 which specifically states that the extensive modeling undertaken as part of the EIAR demonstrates that the receiving water will meet good status criteria and will meet the Environmental Quality Objectives for coastal water nutrient levels. Chapter 8 in Volume 3 Part A of the EIAR of the 2018 planning application are supplemented by Chapter 8A Of the EIAR Addendum also considers the environmental objectives for relevant areas associated with the Bathing Water Regulations and the Shellfish Waters Regulations.

The applicant continues that as a result, under expected operating conditions, the discharge of waste water from the proposed project, in conjunction with existing discharge to the receiving waters will not cause or exacerbate breaches of the combined approach set out to the Waste Water Discharge (Authorisation) Regulations 2007.

9.10.6. The WFD assessment was carried out by the applicant to assess the proposal and assess how it may impact on WFD waterbodies and it takes account of both the construction phase and the operational phase. The applicant cited the 2017 UK

Environment Guidance Water Framework Directive Assessment: Estuarine & Coastal Waters which is acceptable. The receiving waters in the context of the proposed development is a coastal water body, Irish Sea Dublin (HA09), which is of 'Good' status and not deemed to be 'at risk'. During construction, the impact will primarily be from the increased sedimentation within the water column during the deposition of the dredge material. During operation, the primary issue of concern in this water body during this phase is the discharge of the treated effluent to the marine waters and the potential impact from the following pollutant parameters, BOD, DIN, MRP, Escherichia Coli and Intestinal Enterococci.

9.10.7. Following the High Court Judgment and having regard to third party concerns and additional information submitted by the applicant, the Board's Inspectorate Environmental Scientist, Emmet Smyth was commissioned to review the relevant information with particular regard to the EIAR Addendum, Chapter 8A regarding Marine Water Quality and the Water Framework Directive Assessment included as a separate report. His assessment, hereafter to as Specialist Report no.1 provides specific advice in relation to (i) the adequacy of the EIAR Addendum in relation to marine water quality and the WFD Assessment, included as a separate report and (ii) the combined approach. In preparing his report, he has had regard to submissions and observations received by the Board as they relate to the combined approach assessment and wastewater discharge. The Report was also updated further to submissions received by the EPA pursuant to the Article 44 consultation. Specialist Report no.1 is appended to this Inspector's Addendum Report, as Appendix 3.

9.10.8. The Specialist Report no.1 sets out the scope of the report, the legislative requirements including relevant provisions of the Water Framework Directive (WFD) and the Wastewater Discharge (Authorisation) Regulations. Relevant protected areas, as they relate to the proposed discharge, are considered. An explanation of the combined approach is set out, and having regard to the further information submitted by the application considers that the applicant has demonstrated that the discharge from the proposed development would not, in conjunction with existing discharges to the receiving waters, cause or exacerbate breaches of the combined approach as defined above. A discharge impact assessment, which considers the average daily flow and the flow to full treatment scenarios follows and examines:

- model inputs;
- the baseline environment, including WFD status, bathing waters status and trophic status;
- construction phase and modelling;
- operational phase and modelling including Dissolved Inorganic Nitrogen (DIN), Molybdate Reactive Phosphorus (MRP), Biochemical Oxygen Demand (BOD), Escherichia coli (EC), Intestinal Enterococci (IE);

9.10.9. The following, at section 7.0 of Specialist Report no. 1, is relevant:

‘The updated modelling has categorically demonstrated that under the European Union Environmental Objectives (Surface Waters) Amendment Regulations 2019 (S.I. 77 of 2019) the receiving waters will be able to attain ‘good status’ and meet the environmental quality objectives for nutrients in transitional and coastal waters. Based on the modelling carried out the applicant states that the proposed project will have an imperceptible residual impact on coastal water quality. Regarding the WFD, the modelling has predicted an imperceptible residual impact on coastal water quality and will not impede our ability to achieve our objectives under the WFD, namely achieving good status in all waterbodies. Having regard to the Bathing Water Regulations the updated modelling has shown imperceptible residual impact on the water quality of the coastal waters and further attested that the updated modelling has shown that the discharge from the proposed project will not influence any designated bathing water beaches nor Blue Flag beaches. Regarding shellfish waters, updated modelling has shown imperceptible residual impact on the water quality of the coastal waters and further attested that the updated modelling has shown that the discharge from the proposed project will not influence any of the designated shellfish waters.’

9.10.10. The updated modelling considers the cumulative impact (pollutant loadings) of other wastewater treatment plants and rivers discharging to the effected waters.

9.10.11. Consideration of third-party concerns with respect to circulation and tidal patterns are addressed in section 7.0 of the Specialist Report wherein it is concluded that the modelling carried out is representative of the conditions within the marine

environment and I am satisfied that no concerns remain with regard to the hydrodynamic modelling.

9.10.12. The applicant, in the conclusion of the WFD Assessment, states that the proposed project will have an imperceptible to slight impact on coastal water quality will not have an impact on the achievement of WFD objectives. The Specialist Report No. 1 agrees that the risk to the marine waters is imperceptible to slight and states that the discharge from the proposed development whilst serving 0.5 million p.e., will not cause a deterioration of the status, will not compromise the achievement of 'good' ecological status, or compromise the maintenance of 'good' chemical status. The proposed development, with nutrient removal and UV disinfection, is compatible with the achievement of bathing water quality standards and the revised modelling submitted supports this and notes that the discharge to the marine waters will be controlled in accordance with a discharge licence to be issued by the EPA.

9.10.13. The EPA was consulted as required, under Regulation 44 of the Waste Water Discharge (Authorisation) Regulations, as amended inter alia, by SI 480/2024. In response, the EPA commented that:

- (i) stormwater overflows and emergency overflows from an agglomeration are part of wastewater discharge and form part of the assessment when considering the likely impacts on surface water bodies and that the EPA will be doing its own assessment as part of the licence application. This assessment will address the environmental impact arising from all wastewater discharges, including those from storm water overflows and emergency overflows.
- (ii) the Agency will be doing its own assessment as part of the consideration of the licence application. The discharge will be controlled according to the combined approach and stricter limits can be applied where necessary.
- (iii) The WWD Regulations do not regulate:
  - a. Wastewater treatment plants other than the actual discharge
  - b. Odours from wastewater treatment plants including associated infrastructure (e.g. pumping stations)

- c. Noise from wastewater treatment plants including associated infrastructure (e.g. pumping stations).

9.10.14. In addition, the Agency advises that it will have regard to the Board's observations in respect of the licence application.

9.10.15. The Inspectorate Scientist has considered the response of the EPA and clarifies the position with regard to overflows as follows, refer to Appendix 3 appended to this Inspector's Addendum Report:

"Whilst having regard to the comments made by the Agency in response to the Article 44 consultation dated 4th April 2025, what was stated in 6.1 earlier in this report may have been misunderstood by the Agency. The modelling conducted is an updated version to include the addition of UV treatment of the effluent prior to discharge to the marine environment, regarding both the modelling E.coli and Intestinal Enterococci. The modelling has also used revised inputs from the 10 of the 15 rivers used in the numerical modelling to reflect more recent data whilst modelling for the following parameters DIN, BOD and MRP. Regarding the existing and proposed surface water outflows in the response to submissions report section 2.2.1.2.48 the applicant has clarified that there are no proposed overflows on the proposed orbital sewer route. The existing overflows on the network will be diverted away from Ringsend WWTP and into the proposed WWTP and to the marine outfall, which has been modelled. Additionally, any existing surface water or emergency overflows have been captured by the revised inputs from the rivers utilising the updated data. I am satisfied that the modelling adequately represents the impact at the marine outfall discharge point whilst fully incorporating the loadings from the rivers to the transitional waters and marine environment."

9.10.16. I am satisfied that existing stormwater and emergency overflows form part of the modelling before the Board and are therefore subject to assessment as part of the proposed development.

9.10.17. On a point of clarification, the description of the proposed development does not reference overflows (as it does in the WWDL application before the EPA) and the only point of discharge in the proposed development before the Board is the marine outfall discharge point, however overflows are fully considered and assessed in the

EIAR, EIAR Addendum including the marine water quality modelling submitted by the applicant with respect to the impact at the marine outfall discharge point.

9.10.18. The Response to Submission Report (section 2.2.1.2.48) clarifies that there are no proposed overflows on the proposed orbital sewer route, and therefore, none are shown in the planning application drawings and that the existing overflows on the network will be diverted away from Ringsend WwTP and into the proposed WwTP and further clarifies (section 3.2.1.2.8) that the only surface water discharge point modelled for the Proposed Project is the discharge location at the end of the proposed outfall pipeline in the Irish Sea.

9.10.19. I conclude, having regard to the EIAR Addendum, which includes updated marine discharge modelling, the WFD Assessment, the appended Specialist Report No. 1 and the EPA consultations in respect of Regulation 44 of the WWD Regulations, that there will be an increase of wastewater discharges on foot of the proposed development and that the impact, cumulatively with already existing discharges will have an imperceptible to slight impact on the environment and water quality. Having regard to the above, I am satisfied that the applicant has demonstrated that the marine discharge will not have an adverse effect on the quality of the receiving waters and that the proposed development will not result in a risk of deterioration of any water body, in this instance coastal waters, either on a temporary or permanent basis. Regarding the combined approach and having assessed the information submitted the discharge of wastewater from the proposed development, I am satisfied that in conjunction with existing discharge to the receiving waters would not cause or exacerbate breaches of the combined approach.

#### **9.11. Roads, Traffic & Infrastructure**

9.11.1. A number of third-party submissions object to the proposed development on grounds relating to traffic impact in the area. Other concerns are that the Moyne Road railway bridge may not be able to accommodate heavy vehicles; that an updated Road Safety Audit is necessary, and a new traffic assessment is needed that takes into account major changes in affected network including an adjustment for summer traffic and Lidl traffic on Strand Road, Portmarnock.

9.11.2. The DAA note, in its observation, that the development has significant potential to impact on the external road network and request that construction traffic plans must be developed with and agreed with DAA. The NTA note that the GDD project would cross the proposed bus corridor at the Collinstown Cross junction on the R132 (Bus Connects Swords to City Centre Core Bus Corridor Scheme). It requests that the Engineering Specialist Report for Crossings and the description of the proposed project should be updated to reference the Metrolink project, and that the applicant is conditioned to engage with the NTA and TII Metrolink Project Team. TII request that any crossing of the national road network require prior consultation with TII and compliance with TII standards.

9.11.3. Having regard to the EIAR Addendum and the new policy framework of the Fingal Development Plan 2023 – 2029, I consider that the main issue arising relates to the protection of existing and planned roads and transport infrastructure. Having regard to baseline data updates to the EIAR Addendum, other issues of significance relate to construction traffic impacts on the road network and operational traffic impacts, and these are considered in section 10.18 of this Inspector's Addendum report.

9.11.4. **Protection of existing and planned roads and transport infrastructure**

With regard to existing and planned roads and transport infrastructure, the following is of note:

- the location of the development in the area to the north of the M50 and close to the junction of that motorway with other major roads, which already suffer some peak time congestion means that traffic impacts constitute a significant issue in this case;
- Metrolink;
- Bus Connects;
- a future road which is planned to be developed to the south of the WwTP / SHC site. The planned road is the Malahide Road realignment scheme (or East West Distributor Road) will see the development of a road between Malahide Road to Stockhole Lane and from Stockhole Lane to Cherryhound, Sheet 17 and Table 6.3 of the FDP refers.



- A road proposal and GDA cycle network is indicated along Stockhole Lane to the west of the proposed WWTP, Sheet 17 of the FDP refers.

- 9.11.5. Since the submission of the 2018 planning application, the National Transport Authority (NTA) have published the Greater Dublin Area Transport Strategy 2022-2042 (GDATS) (NTA 2022a). The GDATS commits to the existing transformative public transport projects including Bus Connects, DART+ and Metrolink and significant investment is planned for Fingal and particularly as it relates to the corridor connecting Fingal and Dublin City Centre, which includes the foregoing projects, among others.
- 9.11.6. Cumulative impacts are assessed in section 10.22 of this Inspector's report. There is potential for cumulative impacts with a number of other identified projects, however I am satisfied that impacts can be mitigated with coordination of project teams to be detailed in the CEMP and associated traffic management plan. I further note that the nature of these projects is consistent with development in the Fingal area, and any construction related impacts will be temporary in nature.
- 9.11.7. With regard to the Malahide Road Realignment Scheme, the EIAR Addendum states this is still a stated objective of FCC, it is not currently being actively progressed, and FCC have no indications when it may proceed. The EIAR Addendum states that there are no changes to the information provided on the Malahide Road Realignment Scheme in this Section of the EIAR since the 2018 planning application.
- 9.11.8. The Board will note that one of the two amendments to the description of the development as originally applied for in 2018 relates to the extension of the culvert over the River Mayne, at the location of the proposed access road into and south of the proposed WwTP, from 21m to 25m, which is stated to cater for the full width of the future link road. The construction of the Mayne River culvert will facilitate both the proposed one-way WwTP access road and the adjacent Craobh Chiaráin GAA club access road proposals. The access arrangement is shown as the blue hatched area on drawing 32102902-1067 included with Appendix 2- Appendix A Part 2 of the CEMP. The updated culvert drawings ref 32102902-2148 and 32102902-2149 (Proposed Culvert at Mayne River Crossing) detail the extended culvert.
- 9.11.9. I note Appendix A13.5 Responses to Traffic and Transport Questions at the 2019 Oral Hearing, which states the proposed one-way single carriageway WwTP access

road follows the exact alignment of the indicative North-South Link Road provided by Fingal County Council and further:

“It is proposed that the western kerb line of the proposed access road be fixed along the kerb line of the outline North-South Link Road and construct a 5.0m wide carriageway to the east side, with a 2.0m wide footway to the west side of the kerb line. By following the line of the western kerb line, the construction of the proposed WwTP access road will not prejudice the FCC objective of the future North-South Link Road. If the North-South Link Road is developed over time, the proposed access road being fixed to the western kerb line, will ensure that the WwTP access can be maintained whilst road construction work to the east side of the access road can take place to construct the road cross section that will be determined by FCC as their plans for the area develop.”

9.11.10. The North-South link road is indicated on Sheet 17 of the Fingal DP 2023-2029 and is connected to Stockhole Lane Upgrade and the East-West Distributor Road: Malahide Road to Stockhole Lane transportation scheme identified in Table 6.3 of the FDP. I am satisfied that there is no local policy which alters the applicant's statement above. Furthermore, there are no plans advanced or made known by FCC which would warrant a departure from the applicant's statement, and I am satisfied that the proposed access road design to the proposed WwTP remains relevant. Having regard to the foregoing, I am satisfied that the design of the proposed WwTP access road is such that it will not prejudice the future link road.

## 9.12. Flood Risk

9.12.1. A revised Flood Risk Assessment (FRA) Report (August 2023), prepared by J. B. Barry & Partners, accompanies the further information. The original and Revised FRA determined that the above-ground structures (proposed WwTP and Abbotstown pumping station) will be located in Flood Zone C (low risk zone), which is considered an appropriate zone for the siting of 'highly vulnerable development (including essential infrastructure)', as per the Flood Risk Management Guidelines for Planning Authorities (2009). The below-ground structures (i.e. pipelines) are not considered to be vulnerable to flooding. The report primarily investigates the flood risk to the main

infrastructure proposed, namely the proposed WwTP and the proposed Abbotstown pumping station as these could be adversely affected or damaged by flooding.

9.12.2. The previous Inspector's Report concluded that the development would not result in increased flooding downstream of the site and would not give rise to adverse ecological consequences or effects on material assets including in the construction phase. The development is not itself vulnerable to flooding.

9.12.3. A 2022 third-party submission queries whether a Section 50 consent is required from the OPW. It also stated that ABP failed to prescribe OPW as a notifiable body for the application and queries if the new culvert will lead to flood risk.

9.12.4. I have reviewed the revised FRA and that submitted with the application lodged in 2018 and save for the development description which refers to the introduction of UV treatment and the proposed widened culvert across River Mayne, there are no other changes to the FRA as originally submitted. I have examined data available on the OPW's website (floodinfo.ie) for the purposes of this assessment. I have considered the Outline CEMP Addendum – Appendix 2 Surface Water Management Plan and note that there are no changes of substance relating to flooding or flood risk; the principal changes therein relate to surface water body status and the proposed extended culvert across the River Mayne. Save for consideration of an extended culvert over the River Mayne which is located at the site of the proposed WwTP and SHC, I am satisfied that the assessment undertaken by the Inspector ABP-301908 remains relevant. My assessment of the FRA in respect of the site of the proposed WwTP and SHC follows.

9.12.5. **Proposed WwTP & SHC**

9.12.6. The proposed WwTP site is located on agricultural land in the townland of Clonshagh in the Mayne River catchment. This site is located ca. 2.5km to the east south east of Dublin Airport and 1.5km to the east of the M1/M50 junction and is bounded by the Cuckoo Stream (a tributary of the Mayne River) to the north. The River Mayne located ca. 200m to the south of the site, discharges into Baldoyle Estuary (ca. 6km downstream). No development will occur within 20m of the Cuckoo Stream. The access to the site is from the south and requires the proposed culvert of the River Mayne to be extended by 4m (from 21m as applied for in 2018) to 25m to

cater for the full width of the future north south link road. The egress to the site is from the west and does not require culverting of any watercourse.

9.12.7. A small portion of the proposed WWTP site lies within the 100 and 1000 year fluvial flood extents. Similarly, the tidal flood zones, show that a small northern portion of the proposed WwTP site is within the 200 and 1000 year tidal flood extent. However, there will be no development in this portion of the site. All essential infrastructure will be constructed in areas of the site that are outside of the 1000 year tidal and fluvial flood extents. The portion of the site within the 100 year fluvial and 200 year tidal will be used for landscaping purposes. Therefore, in accordance with the Planning System and Flood Risk Management Guidelines, the proposed WwTP site is located in Flood Zone C where the probability of fluvial and tidal flooding is low risk (i.e. less than 0.1% AEP or 1 in 1000 for both river and coastal flooding). I note and accept, in accordance with Table 3.2 of the FRM guidelines, that a justification test is not required for the proposed development and is deemed appropriate development for the Flood Zone Category C.

9.12.8. The proposed access to the treatment plant from the R139 will be constructed over the Mayne River, drawings 32102902-2148 P02 and 32102902-2149 P02 refer. The Outline CEMP states that the existing culverting arrangements at this location will be replaced with a new culvert which will be sized in accordance with the OPW's Section 50 consents so as not to cause an afflux (i.e. backing up of the river increasing the water level) thereby ensuring that there is no change to the existing flooding regime of the Mayne River. The OPW is required to be consulted with respect to the Section 50 consent which the applicant states will be required for the culvert in due course. This is a matter for the applicant and the OPW.

9.12.9. Surface water from the northern part of the proposed WwTP site drains to the Cuckoo stream which is a tributary of the Mayne River. Surface water from the southern part of the site drains to the Mayne River which is located ca. 200m to the south. A small region to the east of the site drains into a minor tributary of the Mayne River. It is proposed to incorporate SuDS principles into the design of the proposed WwTP layout. Having regard to the foregoing, I agree with the FRA that pluvial flood risk is not considered to be significant.

9.12.10. **Conclusion**

9.12.11. There is no discernible difference between the original submitted FRA in 2018 and the revised FRA submitted in 2023. I agree with the conclusion of the Inspector's report ABP-301908 that the proposed development would not result in increased flooding downstream of the site and would not give rise to adverse ecological consequences or effects on material assets including in the construction phase. I am, therefore, satisfied that as there is no flood risk there is no requirement to notify or consult with the OPW.

### **9.13. The Board's Climate Duties**

9.13.1. The Board will be aware of its duties under Section 15 of the Climate Action and Low Carbon Development Act 2015, as amended. The 'Climate Act' requires that An Bord Pleanála perform its functions in a manner consistent with—

- (a) the most recent approved climate action plan,
- (b) the most recent approved national long term climate action strategy,
- (c) the most recent approved national adaptation framework and approved sectoral adaptation plans,
- (d) the furtherance of the national climate objective, and
- (e) the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.

9.13.2. The applicant's position is that while the GHG emissions associated with the operational phase of the proposed project will be long-term and significant in nature, there are considerable co-benefits of providing a regional secondary and tertiary treatment process (with capacity for municipal wastewater to 500,000PE and a sludge treatment to a capacity of 750,000PE), heat and energy recovery capacity, on-site power generation and minimised biosolids production, which will support Water Framework Directive objectives, National Adaptation Framework, the objectives of the Planning and Development Act Policy and Policy CAP 13 which encourages the production of energy from renewable sources in the Fingal Development Plan 2023 – 2029.

9.13.3. The recently approved Climate Action Plan 2025 is to be read in conjunction with the Climate Action Plan 2024 and reflects Ireland's commitment to Ireland's 2030 and

2050 targets for reducing greenhouse gas emissions and provides the governance framework to ensure emissions stay on track. Ireland is now on a legally binding path to net-zero emissions no later than 2050, and to a 51% reduction in emissions by the end of this decade. Relevant actions include:

- to reduce carbon in construction materials for all new building and to reduce industry fossil fuel demand through energy efficient measures;
- to improve the resilience of Ireland's water infrastructure through implementation of a Nature Based Solutions (NBS) Programme;
- to develop adaptation plans for water quality and water services infrastructure;
- 20% reduction in total vehicle kilometres travelled relative to business-as-usual, 50% reduction in fuel usage, and significant increases to sustainable transport trips and modal share.

9.13.4. Wastewater treatment and discharge fall under the category of 'other' and Chapter 20 of CAP24 is relevant where actions include:

- continue to implement the Waste Action Plan;
- prioritise prevention planning in construction water (among others);
- encourage circular economy behaviour; and,
- reducing methane by adopting a circular economy.

9.13.5. Ireland's Long-term Strategy on Greenhouse Gas Emissions Reduction 2024 supports a circular economy and bio-economy approach. Ireland's National Adaptation Framework - Planning for a Climate Resilient Ireland 2024 includes action to improve treatment capacity and network functions for water quality and water service infrastructure.

9.13.6. The 'national climate objective' is defined in the Climate Act as follows:

"The State shall, so as to reduce the extent of further global warming, pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy."

9.13.7. I assess climate impacts of the proposed project in the EIA section of this report (refer to section 10.17 below). I am satisfied that, subject to mitigation measures, the

GHG emissions associated with the construction phase of the proposed project will be minor adverse, not significant and short-term. I concur with the applicant that the GHG emissions in kt CO<sub>2</sub>e associated with the operational phase of the proposed project, following the implementation of mitigation measures, will be moderate adverse, significant and long-term.

- 9.13.8. During the operational phase, the proposed development will have capacity to recover energy and produce a biosolid fertiliser product and so will contribute to a circular economy which will assist in meeting climate actions set out in CAP24 with regard to waste. There is further scope at detailed design stage to further reduce emissions. During the construction phase, the GHG emissions associated with the construction phase will be minor adverse, not significant and short-term and includes a suite of mitigation measures (see EIA section 10.17 of this report) to mitigate climate impact which are in line with CAP25, specifically in relation to transport and construction.
- 9.13.9. Emissions generated as a consequence of wastewater and sludge treatment have high emission factors and alternatives to treat wastewater volumes at similar scales are not currently available. These emissions will arise as a result of significant population growth. I note that any requirements resulting from the (Recast) Urban Wastewater Treatment Directive will in time introduce new obligations that align urban wastewater treatment with EU climate and energy goals and with which Ireland will be required to implement.
- 9.13.10. With this in mind, and having considered the matters set out in section 15 of the Climate Act, I consider that a decision by the Board to grant permission for the proposed development would be in accordance with its duties under section 15 of the Climate Act in the context of a development which by its very nature generates emissions by ensuring it is recovering energy and contributing to a circular economy, and which in time will be required to comply with new climate and energy obligations as a result of the Recast Urban Wastewater Treatment Directive.
- 9.13.11. In coming to this conclusion, I have had regard to the most recent approved CAP25 and CAP24, long-term climate action strategy and the national adaptation framework that were in place at the time of completing this report.

## **10.0 Environmental Impact Assessment**

### **10.1. Statutory Provisions**

10.1.1. The statutory provisions dealing with the requirement for EIA are addressed in the Inspector's Report of ABP-301908 and are not repeated here.

### **10.2. EIAR Addendum**

10.2.1. The EIAR has been updated by way of an EIAR Addendum furnished with the information received in October 2023. In preparing the Addendum Report, Uisce Éireann had regard to changes to the baseline environment; the requirement for updated surveys; changes to the law, policy, and industry standards and guidance in the intervening period, relevant information presented at the Oral Hearing, the High Court Judgment dated 24th November 2020 (bearing High Court Record No. 2020 JR 22) in respect of that application and the addition of ultraviolet (UV) treatment and the extension to the River Mayne culvert, such that the proposed project description has been updated.

10.2.2. As stated at the outset of this Inspector's Addendum Report, the proposed development is amended since the ABP-301908 was submitted to the Board in 2018. The amendments are:

- The inclusion of ultraviolet (UV) treatment at the proposed wastewater treatment plant (WwTP) in Clonshagh (Clonshaugh), although this was introduced during the Oral Hearing and subsequently included as a condition in the report of the Inspector ABP-301908
- The extension of the River Mayne Culvert along the proposed access road to the proposed WwTP. (from 21m to 25m) , although this was introduced during the Oral Hearing and subsequently included as a condition in the report of the Inspector ABP-301908;
- Permission has since been granted and development has commenced for the Regional Biosolids Storage Facility (RBSF) which originally formed part of the GDD application. It no longer forms part of the proposal before the Board, refer to section 3.2 of this Inspector's Addendum Report.



10.2.3. Having regard to the foregoing, this Addendum Report accordingly focuses on an assessment of the new information provided including the updates to the EIAR in the EIAR Addendum and the revisions to the proposed development. I confirm that this section of my report must be read in conjunction with the Inspector's Report ABP-301908 and in particular section 9 on EIA.

### 10.3. EIA Structure

10.3.1. This section of my report comprises the environmental impact assessment of the proposed development in accordance with the Planning and Development Act 2000 (as amended) and the associated Regulations, incorporate the European directives on environmental impact assessment (Directive 2011/92/EU as amended by 2014/52/EU). Section 171 of the Planning and Development Act, 2000 (as amended) defines EIA process as:

- a. consisting of the preparation of an EIAR by the applicant, the carrying out of consultations, the examination of the EIAR and relevant supplementary information by the Board, the reasoned conclusions of the Board and the integration of the reasoned conclusion into the decision of the Board, and
- b. includes an examination, analysis and evaluation, by the Board, that identifies, describes and assesses the likely direct and indirect significant effects of the proposed development on defined environmental parameters and the interaction of these factors, and which includes significant effects arising from the vulnerability of the project to risks of major accidents and/or disasters.

10.3.2. Article 94 of the Planning and Development Regulations, 2001 and associated Schedule 6 set out requirements on the contents of an EIAR.

10.3.3. The EIA section of this report is, therefore, divided into two sections.

10.3.4. The first section assesses compliance with the requirements of Article 94 and Schedule 6 of the Regulations.

10.3.5. The second section provides an examination, analysis and evaluation of the development and an assessment of the likely direct and indirect significant effects of

it on the following defined environmental parameters, focusing on the EIAR Addendum and new information:

- population and human health,
- biodiversity, with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive,
- land, soil, water, air and climate,
- material assets, cultural heritage and the landscape,
- the interaction between the above factors, and
- the vulnerability of the proposed development to risks of major accidents and/or disasters.

10.3.6. It also provides a reasoned conclusion and allows for integration of the reasoned conclusions into the Boards decision, should they agree with the recommendation made.

#### **10.4. Issues raised in respect of EIA**

10.4.1. Issues raised in respect of EIA by third parties before and after receipt of the further information (i.e. prior to the submission of the EIAR Addendum) are:

Post submission of the EIAR Addendum (i.e. submission received in 2024):

- Out-of-date surveys and paucity of data;
- Failure to adequately model discharge;
- Inadequate cumulative assessment;
- EIAR fails to identify any geological faults that aren't major.
- EIAR update methodology, difficult to decipher.

Prior to submission of the EIAR Addendum (i.e. submissions received in 2022):

- The EIAR is out-of-date.
- Inadequate cumulative impact assessment.
- Inadequate marine water quality modelling, including in relation to shellfish impacts; Inadequate dredging trench dimensions modelled.
- Questioning acoustic model and veracity of impacts;

- The absence of any confirmation notice of acceptance of the supplemental planning application on the EIA portal.
- EIAR failed to adequately address the seal breeding colony located on Ireland's Eye; that seal census data used in 2018 was inappropriate; concerns over bioaccumulation in foraging seal species.
- EIAR failed to assess impact on European eel and salmon.
- EIAR should include the expanded capacity of the proposed WWTP.

The Board will note that many of the concerns raised by third parties are general in nature, and in some instances do not expressly reference the EIA/EIAR but relate to matters contained within or assessed as part of the EIAR and are relevant to the EIA, for example, noise, odour, traffic, biodiversity, visual impact and so forth. The issues raised are set out in more detail in section 4.0 of this report. Matters raised (and relating to the EIAR and of relevance to the EIA) are elaborated on in the assessment below.

#### 10.5. **Compliance with the Requirement of Article 94 and Schedule 6 of the Regulations 2001, as amended**

10.5.1. Having regard to the updated baseline data, including survey information to inform the EIAR Addendum, it is considered prudent to consider compliance with Art. 94 and Schedule 6 of the Regulations, 2001 in respect of the EIAR as updated by the EIAR Addendum.

<b>Article 94 (a) Information to be contained in an EIAR (Schedule 6, paragraph 1)</b>
--

A description of the proposed development comprising information on the site, design, size and other relevant features of the proposed development (including the additional information referred to under section 94(b)).
--

A description of the proposed development is contained in Chapter 4 of the EIAR and 4A of the EIAR Addendum including details on the location, site, design of the development, including details of the pumping station, orbital sewer, wastewater treatment plant and outfall pipeline, arrangements for access for various elements of the proposed development, construction methodology, and waste to be generated. Where relevant, the EIAR details are provided on use of natural resources and the production of emissions and/or waste. The description is adequately detailed to allow assessment of the likely effects on the environment.
---

A description of the likely significant effects on the environment of the proposed development (including the additional information referred to under section 94(b)).
--

An assessment of the likely significant direct, indirect, and cumulative effects of the development is carried out for each of the technical chapters of the EIAR, as updated by the EIAR Addendum. I am satisfied that the assessment of significant effects is comprehensive and robust and enables decision making.
A description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment of the development (including the additional information referred to under section 94(b)).
The EIAR includes designed in mitigation measures and measures to address potential adverse effects identified in technical studies. These, and arrangements for monitoring, are summarised in Chapter 24 and 24A (Summary of Mitigation Measures).
A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment (including the additional information referred to under section 94(b)).
A description of the alternatives considered relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment is contained in Chapter 5 of the EIAR and Chapter 5A of the EIAR Addendum.
<b>Article 94(b) Additional information, relevant to the specific characteristics of the development and to the environmental features likely to be affected (Schedule 6, Paragraph 2).</b>
A description of the baseline environment and likely evolution in the absence of the development.
A description of the baseline environment is included in each technical chapter of the EIAR, as updated by the EIAR Addendum, and an assessment of the likely evolution of it, in the absence of the proposed development.
A description of the forecasting methods or evidence used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information, and the main uncertainties involved
The methodology employed, including the forecasting methods are set out, in each of the individual chapters assessing the environmental effects. The applicant has indicated in the different chapters where difficulties have been encountered (technical or otherwise) in compiling the information to carry out EIA. I am satisfied that forecasting methods are adequate in respect of likely effects on the environment.
A description of the expected significant adverse effects on the environment of the proposed development deriving from its vulnerability to risks of major accidents and/or disasters which are relevant to it.
This issue is specifically dealt with in Chapter 22 of the EIAR, as updated by Chapter 22A of the EIAR Addendum.
Article 94 (c) A summary of the information in non-technical language.
A Non-Technical Summary accurately reflects the chapters in the main volume.
Article 94 (d) Sources used for the description and the assessments used in the report

The sources used to inform the description, and the assessment of the potential environmental impact are set out at the end of each chapter. I consider the sources relied upon are generally appropriate and sufficient.
---

<b>Article 94 (e) A list of the experts who contributed to the preparation of the report</b>
--

A list of the various experts who contributed to the Addendum report are set out in Appendix A1.1 of the EIAR Addendum. I am satisfied that the EIAR and EIAR Addendum have been prepared by experts with competency in the technical subject areas.
--

#### 10.5.2. Consultations

10.5.3. Following the remittal Order and public consultation, a number of third parties raised concerns regarding the lack of public consultation. In addition, some submissions questioned the accessibility of the statutory, planning, and environmental documentation submitted and the time allowed for making submissions during the statutory consultations.

10.5.4. With respect to consultation following the remittal Order, the Board wrote to the parties that had made submissions as part of the original consultation process in 2018, advising that the case had been reactivated under a new reference number (ABP-312131-21). That letter noted that the original permission had been set aside and remitted to ABP and invited those interested parties to make any further general submissions / observations on the planning application by 30 September 2022. A total of 16 submissions were received.

10.5.5. Following the submission of significant additional information in October 2023, the applicant published newspaper notices in May 2024 and informed prescribed bodies of the upcoming consultation period by letter. The additional information was placed on public display at ABP's office and the offices of Dublin City Council and Fingal County Council. Additionally, the application documentation was available on the dedicated project website ([www.gddapplication.ie](http://www.gddapplication.ie)). Prescribed bodies, interested parties and the general public were able to make observations on the further information. A total of 23 submissions were received in respect of the additional information. Submissions from statutory bodies and third parties are considered in this report, in advance of decision making.

10.5.6. Having regard to the foregoing, I am satisfied that appropriate consultations have been carried out and that third parties have had the opportunity to comment on the proposed development in advance of decision making. I have considered the need

to re-open the oral hearing, following requests from third party to hold an Oral Hearing. In my opinion it is not necessary to re-open the Oral Hearing and this is elaborated on in section 6 of this Inspector's Addendum Report.

#### **10.5.7. Alternatives**

I note that some observers raised concerns regarding alternatives. As detailed above, a description of the alternatives considered relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment is contained in Chapter 5 of the EIAR and Chapter 5A of the EIAR Addendum. Based on the new information supplied by the applicant, I am satisfied that the conclusions of the Inspector in her report ABP-301908 at sections 8.3.2 'Alternatives Site Selection' and 9.5 'Alternatives' still stand.

#### **10.5.8. Compliance**

Having regard to the foregoing, I am satisfied that the information contained in the EIAR, as updated by the EIAR Addendum, and supplementary information provided by the applicant is sufficient to comply with article 94 of the Planning and Development Regulations, 2001, as amended.

### **10.6. Assessment of Likely Significant Effects**

10.6.1. This section of this Addendum Report focuses on an assessment of the new information provided including the updates to the EIAR in the EIAR Addendum and the revisions to the proposed development. Therefore, this section of my report must be read in conjunction with the Inspector's Report ABP-301908 dated 10<sup>th</sup> October 2019 for a complete assessment of the likely significant effects of the proposed development on the environment. The assessment in this Addendum Report is set out by reference to the following headings as contained in Section 171A of the Planning and Development Act 2000, as amended.

- Population and human health.

- Biodiversity, with particular attention to the species and habitats protected under the Habitats and Birds Directives (Directive 92/43/EEC and Directive 2009/147/EC respectively).
- Land, soil, water, air and climate.
- Material assets, cultural heritage and the landscape.
- The interaction between these factors.
- The vulnerability of the proposed development to risks of major accidents and/or disasters.

10.6.2. Each topic section is structured around the following headings:

- Issues raised in the application (relating to new information).
- Examination of the EIAR Addendum.
- Analysis, Evaluation and Assessment of Addendum information: Direct and indirect effects.
- Conclusion: Direct and indirect effects.

10.6.3. For ease of reference the layout of this EIA section of this Addendum Report follows that of the Inspector's Report ABP-301908.

## **Population and Human Health**

### **10.7. Population**

#### **10.7.1. Issues raised**

10.7.2. A number of the 2022 submissions requested that the application and associated assessments/report take account of the 2022 Census. A number of submissions stated the report and initial reviews are now out of date, including capacity figures based on 2022 Census. Additionally, there are calls for additional consultation with new populations in the area.

10.7.3. Submissions raised concerns with respect to impact to population from odour, local traffic impact, lack of consultation, air noise and vibration impacts, impacts on residential amenity, local businesses and property prices. Concerns are raised with respect to new flight path directly over the Clonshaugh WwTP and queries the risk to the local population.

10.7.4. Chamber's Ireland refers to the importance of the scheme, including for economic growth, housing, FDI and denser growth, referencing NPF, and Census 2022. It states that failure to advance the scheme raises serious concerns about the capability of the network to cope with future population growth. IBEC in supporting the GDD project, cites population growth in Ireland.

#### 10.7.5. **Context**

10.7.6. EIAR Chapter 6 describes the potential effects of the proposed development on population. The EIAR Addendum, Chapter 6A, reviews any material changes to the original EIAR chapter, summarises the previous conclusions, and provides additional surveys, data or policy developments of relevance, including summary results for Census 2022 for population. Changes to residential development in the vicinity and a review of residential zoned land having regard to the Fingal Development Plan 2023-2029 are considered, as well as local area plan updates. Updates to economic activity and tourism, public amenities and community infrastructure are considered. The Chapter provides an assessment of the validity of earlier conclusions and any amendments to these.

#### 10.7.7. **Potential Significant Effects**

10.7.8. The Board will note that section 9.7.2.1 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to population and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.1 below. Potential significant additional effects arising from the additional information are considered in section 10.7.11 below.

**Table 10.1: Potential Significant Effects (Population)**

##### **Do Nothing**

- The 'do nothing' scenario with no increase in capacity for wastewater treatment, restrictions could be placed on residential, commercial and industrial development within the GDA. The failure to provide sufficient critical infrastructure services will undermine the capacity of the GDA to grow its population in a sustainable manner, and will compromise the ability of the GDA to attract new development and investment.



<b>Construction</b>
<ul style="list-style-type: none"> <li>• The impact due to road closures and diversions at three local roads where open cut techniques are to be used and where residential properties are affected for about 3 days. The impact would be Significant Negative and Temporary.</li> <li>• The impact on Kinsealy Riding Centre through which the pipeline traverses. Due to the nature of this facility involving horses and children the impact of construction through these lands would be Significant Negative and Temporary.</li> <li>• A major alteration to the access arrangement to Craobh Chiarain GAA will be required in connection with construction of the WwTP/SHC site access road. This impact would be Significant Negative and Temporary.</li> <li>• Impacts to the grounds of the NSC and NAC due to construction traffic and the direct impact on the national cross country track through which the orbital pipeline passes. This is a Significant Negative Temporary Impact.</li> <li>• The impacts on some individual houses, including as a result of construction phase working relating to tunnelling. This is a Significant Negative Temporary Impact.</li> <li>• Traffic construction impacts along the already congested junctions along Clonsaugh Road.</li> </ul>
<b>Operational Impacts</b>
<ul style="list-style-type: none"> <li>• Indirect positive effects from the protection of water quality and dependent recreation facilities.</li> <li>• Provision of new infrastructure which will support development of new residential and employment areas. This would be a Significant Positive Long-term impact.</li> </ul>
<b>Decommissioning</b>
<ul style="list-style-type: none"> <li>• Decommissioning is not proposed.</li> </ul>
<b>Cumulative Impacts</b>
<ul style="list-style-type: none"> <li>• No reasonable likelihood of significant cumulative impacts.</li> </ul>

#### 10.7.9. Changes to the Baseline

10.7.10. The EIAR addendum has updated the figures and data in relation to population, existing residential development, land use zonings, economic activity, unemployment, industrial and commercial activity, retail hospitality and service industry, tourism, public amenities and community infrastructure. The 2022 Census figures have been included and the addendum notes over 2 million people, or just over 40% of the population of Ireland, now live in the Greater Dublin Area (GDA). By 2031, the population of the GDA is projected to reach 2.2 million. The population of the ED areas that the proposed WwTP, orbital sewer route, Abbotstown pumping station and outfall pipeline route will be situated in proximity to have generally, with limited exceptions, increased by 15% between 2016 and 2022.

#### 10.7.11. Potential Effects per EIAR Addendum

10.7.12. There is no change to the predicted potential impacts outlined in this Section of the EIAR in the 2018 planning application as a result of the Construction Phase.

During the operational phase, the proposed project will continue to facilitate the delivery of development on lands zoned for such purposes in the statutory development plans for the study area.

10.7.13. There will be a slight negative, slight and temporary Impact on the Holiday Inn Hotel which has opened in the period since the 2018 planning application. This impact arises as a result of potential traffic restrictions and a temporary reduction in amenity that may arise as a result of construction work in the area.

10.7.14. With respect to tourism, public amenities and community infrastructure, there will be a negative, slight and temporary impact on the Baldoyle to Portmarnock Greenway and patrons utilising the Greenway due to construction work, as the proposed outfall pipeline route (land based section) will cross the Greenway and the adjacent R106 Coast Road, while the proposed temporary construction compound no. 9 will be located adjacent to the Greenway it will not directly impact the Greenway.

10.7.15. Consideration is given to the Dardistown LAP; however, this has since expired. Consideration is given to the proposed Metrolink as the proposed orbital sewer route will pass the route of the indicative proposed new Metrolink at a point along the southernmost boundary. The scheduling of works in this area will avoid any adverse impacts on the construction of the proposed new Metrolink. While the timeframe for construction works on both schemes are unknown, it is unlikely that these will be concurrent given the short-term and temporary nature of the construction works for the proposed orbital sewer route within this location. As such, the impact is assessed as Neutral and Imperceptible, which is in line with the impact outlined in this Section of the EIAR in the 2018 planning application.

10.7.16. The operation of the proposed project will have Positive, Significant and Long-Term impact in terms of facilitating future developments proposed within the Dublin Airport LAP in addition to other identified LAPs.

10.7.17. **Mitigation**

A detailed list of mitigation measures are set out in section 6.8.1 of the EIAR. The mitigation measures remain as per the original EIAR.

10.7.18. **Residual Effects**

Residual effects are set out and remain as per Table 6.7 of the EIAR.

10.7.19. **Assessment: Population**

10.7.20. No changes are predicted to the construction phase, except some scheduling of work which may be required as a result of proposed other projects though should they occur simultaneously.

10.7.21. The inclusion of UV treatment will have a positive impact, further reducing microbial counts. During the operational phase, the proposed project will ensure that wastewater generated from the continued growth and economic development of the GDA is appropriately treated in order to safeguard human health and the environment and will be carried out in compliance with the relevant EU Directives and national regulations on water quality. There is potential for socio-economic gain, including economic growth and residential development.

10.7.22. I am satisfied that third party concerns regarding outdated data regarding population has been addressed by the updated EIAR Addendum. Concerns regarding impact on population is explored below under the relevant environmental factor headings.

10.7.23. **Conclusion: Population**

10.7.24. I am satisfied that the proposed development would not have an adverse impact on population, subject to compliance with relevant legislation and guidance, implementation of the EIAR mitigation measures, and compliance with recommended conditions.

10.8. **Human Health**

10.8.1. **Issues Raised**

10.8.2. Submissions raised concerns with respect to impact to human health from odour, local traffic impact, air noise and vibration impacts, marine water quality impacts, potential for large-scale disaster, impact on residential amenity. Concerns are raised

with respect to new flight path directly over the Clonshaugh WwTP and queries the risk to the local population.

10.8.3. The HSE request the applicant to look to enhance or protect population health in line with a Health in All Policies approach and Health Ireland Vision. IBEC, referencing public health state that the GDD project is necessary to meet the WFD requirement and other relevant EU Directives alongside regulations related to water quality and marine outfall.

10.8.4. The EPA in their most recent submission (May 2025) advise that the Waste Water Discharge Regulations do not regulate odours or noise from WwTPs including associated infrastructure.

10.8.5. **Context**

10.8.6. EIAR Chapter 7 describes the potential effects of the proposed development on human health. The EIAR Addendum, Chapter 7A, reviews any material changes to the original EIAR chapter, summarises the previous conclusions, and provides additional surveys, data or policy developments of relevance. The Chapter provides an assessment of the validity of earlier conclusions and any amendments to these. Impact of the proposed development is assessed against marine water quality, traffic and transport, air quality, odour and climate, noise and vibration, hydrology and hydrogeology and soils and geology.

10.8.7. Chapter 15A, Noise and Vibration and Chapter 19A, Agronomy, of the EIAR Addendum are also relevant. Updated baseline environmental noise and vibration monitoring studies were undertaken to inform Chapter 15A, Appendices A15.1 and A15.2 refers. Updated surveys also inform Chapter 19A.

10.8.8. **Potential Significant Effects**

10.8.9. The Board will note that section 9.7.2.2 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to human health and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table

10.2 below. Potential significant additional effects arising from the additional information are considered in section 10.8.15 below.

<b>Table 10.2: Summary of potential Significant Effects (Human Health)</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"> <li>The 'do nothing' scenario holds significant health concerns, which will be removed by the completion of the Proposed Project as there would be insufficient capacity to safely handle the sewerage requirements of the population.</li> </ul>	
<b>Construction</b>	
<ul style="list-style-type: none"> <li>Noise and vibration impacts on a small number of sensitive receptors and on Connolly hospital and the hospice during construction: moderate to imperceptible impacts. Other facilities which are likely to be impacted will not be occupied during evening or night time. Impact duration would be short-term.</li> <li>Aspergillus is of concern where there is largescale construction and where vulnerable communities are present and could affect medical facilities close to compound 1 in the construction phase. This is a potential short-term significant impact.</li> </ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"> <li>Due to the protection of public water supply and the marine environment the development would be associated with significant positive impacts.</li> <li>Positive impacts through the provision of wastewater infrastructure.</li> </ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"> <li>Decommissioning is not proposed.</li> </ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"> <li>No reasonable likelihood of significant cumulative impacts.</li> </ul>	

#### 10.8.10. **Changes to the Baseline**

10.8.11. The EIAR addendum states that there is no change to the neighbouring occupied premises and land uses that should be considered in the assessment of human health impacts. The study areas remain unchanged (1km for the proposed WwTP site and 500m for the proposed orbital sewer route, APS and outfall pipeline route. Using the latest GeoDirectory data (GeoDirectory 2023), it has been established that there has been an increase of ca. 1,219 residential buildings across the study areas. The Holiday Inn Hotel (in temporary use as a protected persons accommodation) has been built on Clonsaugh Road. The Baldoyle to Portmarnock Greenway was constructed. The Flood Risk Assessment was reviewed to assess whether the updates to the proposed project elements would require any changes to the FRA: there are no changes to the outcome of the FRA submitted as part of the 2018 planning application. Two additional beaches in the study area were awarded a Blue Flag Award since the 2018 planning application (i.e. Velvet Strand), now also, Balcarrick Beach in Donabate and South Beach in Rush.

- 10.8.12. Updated baseline environmental noise and vibration monitoring studies were undertaken in 2022 at the same locations as those carried out in 2017 to allow for direct comparison. In general, the measurements for 2022 for most locations were the same or higher than those recorded in 2017 and reflect increased development and activity in the period since 2017.
- 10.8.13. An updated vibration survey carried out at Connolly Hospital. The results of this survey are presented in Appendix A15.2 of the EIAR Addendum and show that there has been no significant change in the baseline since the previous survey was completed.
- 10.8.14. In respect of agronomy impacts, the updated survey noted changes to 19 receptors, as detailed in Table 19.2 in Chapter 19A.
- 10.8.15. **Potential Effects per EIAR Addendum**
- 10.8.16. There is no change to the predicted potential impacts outlined in this Section of the original EIAR as a result of the construction phase.
- 10.8.17. With respect to the operational phase, the inclusion of UV treatment will have a positive impact, as it will further reduce microbial counts.
- 10.8.18. There are no new air emission sources associated with the UV system. The associated UV enclosure will ensure that potential emissions are contained. In addition, there are no materially significant changes in operational phase traffic movements predicted.
- 10.8.19. There are no materially significant noise sources associated with the UV system and the kiosk housing the control equipment will ensure that noise is not audible outside of the enclosure.
- 10.8.20. There is still a critical need to increase the wastewater treatment capacity currently available to the GDA as the population grows.
- 10.8.21. With respect to agricultural impacts, impact magnitude for agricultural land parcels 6, 7, 24 and 25 were downgraded from 'Low' to 'Very Low', given the removal of all or parts of these parcels from agricultural use. The construction phase will continue to have no significant impact on agriculture at a national or local level.

10.8.22. Other impacts were considered in the original EIA (Inspector's Report ABP-301908) and include operational noise, marine water quality impacts, drinking water quality, dust impacts, air emissions and viruses and health issues relating to rodents and were found not to be significant. I concur with the Inspector's assessment ABP-301908 on these matters and nothing of significance has changed.

10.8.23. **Mitigation**

10.8.24. The updates to the project were deemed not to result in any additional impacts, above those identified in the original Chapters 7, 15 and 19 of the EIAR, and no additional mitigation measures were considered necessary. The mitigation measures identified to address the significant effects, as per the EIA, remain.

10.8.25. With respect to the EPA observation that the Waste Water Directive Regulations do not regulate wastewater treatment plants other than the actual discharge, the schedule of conditions includes an additional environmental mitigation measure with respect to odour control at the APS and WwTP as set out in the Inspector's Report ABP-301908.

10.8.26. The Board will note that mitigation measures during construction provides for a Noise and Vibration Management Plan to be prepared as part of the outline CEMP, and that during operation the noise impact assessment has shown that mitigation measures are not required at the proposed WwTP or Abbotstown pumping station. The Inspector's Report ABP-301908 included a condition that requires the submission of a Noise, Vibration and Dust Management Plan, which is in line with the EIAR, EIAR Addendum and is acceptable in my opinion.

10.8.27. **Residual Effects**

10.8.28. The residual impacts remain as presented in the original EIAR and as per the Inspector's Report pertaining to ABP-301908.

10.8.29. Approximately 13.712ha of land will be subject to permanent acquisition from Agricultural Land Parcel 15, 16 and 26. This acquisition will continue to not have a significant residual impact on all of these parcels. Parcel 14 is no longer subject to permanent acquisition as it is now owned by Uisce Éireann. However, given the

proposed land use change for the purposes of the Proposed Project, the residual impact on this parcel of land will remain as Significant.

10.8.30.        **Assessment: Human Health**

10.8.31.        I am satisfied that the impacts on human health, including those arising from noise and vibration and on agronomy remain as assessed and concluded in the EIA of the Inspector's Report ABP-301908.

10.8.32.        I am satisfied that the proposed amendment to the scheme i.e. inclusion of UV treatment, will facilitate reduced microbial count levels in the marine environment (i.e. beyond compliance), and its use will only be of beneficial impacts. I am satisfied that the proposed development would not have any unacceptable significant direct or indirect impacts on human health.

10.8.33.        **Conclusion**

10.8.34.        I am satisfied that the proposed development would not have an adverse impact on human health, subject to compliance with relevant legislation and guidance, implementation of the EIAR mitigation measures, and compliance with recommended conditions.

## **Biodiversity**

### **10.9. Marine Biodiversity**

#### **10.9.1. Issues Raised**

10.9.2. The third-party submissions raise concerns which include that the surveys and data supporting the EIAR are outdated. Concerns were raised with respect to ecoli contamination on shellfish; impacts on shellfish, in particular reference to razor clam, micro-plastic and micro-bead impact, inadequate plume modelling, impact on harbour porpoise and other cetaceans, freshwater temperature impact on marine ecology, pollution concerns from release of raw sewage, querying efficacy of underwater noise modelling and sediment dispersal modelling, impacts arising from Dublin Airport contamination.



### 10.9.3. Context

10.9.4. EIAR Chapter 9 describes the potential effects of the proposed development on marine biodiversity. The EIAR Addendum, Chapter 9A, reviews any material changes to the original EIAR chapter, summarises the previous conclusions, and provides additional surveys, data, literature sources or policy developments of relevance. Updated field surveys were undertaken in respect of geomorphology, marine benthos and sediments, Baldoyle Estuary walkover and visual surveys for designated reefs. The Chapter provides an assessment of the validity of earlier conclusions and any amendments to these.

10.9.5. Chapter 9A is supported by an updated Marine Habitat Assessment Survey Report and Ireland's Eye Sublittoral Biotope Survey Report and the written responses to marine biodiversity queries at the 2019 Oral Hearing.

10.9.6. In addition, I bring the Board's attention to the external consultant's report prepared by Marine Ecologist, Dr. Antony Knights, attached as Specialist Report no. 2 (Appendix 4) which examined third party concerns relating to the marine environment and which assessed the adequacy of the applicant's response to those concerns. I agree with Dr. Knight's assessment that these third-party concerns have been adequately addressed by the applicant.

### 10.9.7. Potential Significant Effects

10.9.8. The Board will note that section 9.7.3.1 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to marine biodiversity and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.3 below. Potential significant additional effects arising from the additional information are considered in section 10.9.16 below.

<b>Table 10.3: Summary of potential significant effects (Marine Biodiversity)</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"><li>The 'do nothing' scenario is likely to be negligible, with a potential for increased pressures from deteriorating water quality conditions in certain locations during certain times of the year or during peak events (such as storms).</li></ul>	
<b>Construction</b>	

<ul style="list-style-type: none"> <li>• Working at the microtunnelling compounds which could impact migratory and juvenile fish, benthos and otter by noise / vibration or pollution.</li> <li>• Surface air venting or bentonite breakout as a result of tunnelling underneath the Baldoyle SAC.</li> <li>• Noise and vibration related to tunnelling operations could impact benthos, fish, seals and harbour porpoise and other cetaceans.</li> <li>• Dredging plume may result in a small reduction in the area available to seals and harbour porpoise for foraging although noise impacts may in any case induce avoidance of the area.</li> <li>• Dredging through direct impacts on the seabed would give rise to a loss of habitat for benthos and fish.</li> <li>• Potential for effects on seasonal migration of salmonids, harbour porpoise and nursery fish species in the area.</li> <li>• Due to significant noise impacts predicted from the construction of the interface between the micro-tunnelling and dredged area and from the crossing of the existing fibre-optic cable, harbour porpoise, salmonids and pinnipeds may be exposed to potentially harmful noise levels.</li> </ul>
<b>Operational Impacts</b>
<ul style="list-style-type: none"> <li>• No likely significant effects arising (see pages 178 and 179 of the original IR).</li> </ul>
<b>Decommissioning</b>
<ul style="list-style-type: none"> <li>• Decommissioning is not proposed.</li> </ul>
<b>Cumulative Impacts</b>
<ul style="list-style-type: none"> <li>• None identified.</li> </ul>

#### 10.9.9. Changes to the Baseline

10.9.10. Since the 2018 planning application, the National Parks and Wildlife Service (NPWS) has published site-specific conservation objectives for a number of European sites considered in the EIAR and the revised Natura Impact Statement associated with the proposed project. A new candidate Special Protection Area (SPA), the North-West Irish Sea cSPA (004236) was designated. In addition to the foregoing, I note that the NPWS have added additional qualifying interests to some designated sites, (Harbour Porpoise in respect of Lambay Island SAC and Codling Fault Zone SAC). Impact on European Sites and qualifying interests are assessed in the Appropriate Assessment of this Inspector's Report, and I direct the Board to same in this regard.

10.9.11. When comparing the results of the most recent subtidal habitat survey in 2023 with the previous habitat surveys presented in the original EIAR, no significant changes in habitat type were noted along the proposed outfall pipeline route (marine section). The sediment and geomorphology outlined in the EIAR in the 2018 planning application remained largely unaltered. The 2023 survey indicated that a fine sand veneer had accumulated at the proposed marine diffuser location, which

was also previously recorded in 2013 (but absent in 2017). An important substrate area south of Ireland's Eye was resurveyed and it was found to be the result of predominately dead shell fragments rather than dead maerl algae. Observations of epifaunal community largely supported previous observations. The sublittoral reef habitats surveys in 2023, undertaken during the winter, indicated no significant changes in the biotopes record. With respect to water quality profiling, recent Dublin Bay datasets confirm high levels of natural suspended sediments, similar to previous observations given in this Section of the 2018 EIAR.

10.9.12. The most recent habitat survey in 2022 carried out as part of Baldoyle Estuary Walkover was recorded using primarily the Fossitt Habitat classification code to align with the methodology used for the terrestrial habitat surveys. The previous walkover survey used the Annex I Habitat classification code, resulting in the slight differences in mapping classifications. Some habitat changes were noted and are indicated in Figures 5.1-5.3 of Appendix 9A.

10.9.13. A visual and passive acoustic monitoring survey of harbour porpoise was repeated in 2021, based on line-transects surveys over selected days in the summer. These surveys concluded a similar importance of the area to this species although the mean density changed. The density estimate is around 44% of that reported in 2013 and 2016 and is stated to reveal a real decrease in the density of harbour porpoises recorded in the Rockabill to Dalkey Island SAC, which the EIAR Addendum states is a decline that has similarly been reported in other SACs designated for harbour porpoise off Ireland's east coast. Recent studies confirm the seasonality of presence of harbour porpoise with the presence of calves in late summer.

10.9.14. Recent studies indicate a significant increase in numbers of both indigenous species pinniped populations around the Howth Head and Lambay Island areas.

10.9.15. The updated information has not resulted in any material change to the presence or importance of key marine ecological receptors.

10.9.16. **Potential Effects per EIAR Addendum**

10.9.17. There is no change to the predicted potential impacts outlined in this Section of the original EIAR as a result of the construction phase. I note, however, that

Chapter 23A which deals with cumulative impacts and environmental interactions and includes EIAR Appendix A23.1, Cumulative Impact Assessment Table, states that dredging activities for the permitted Howth Harbour development (ABP 314487)<sup>1</sup> and the proposed GDD project must be scheduled to occur at different times to mitigate against impacts on marine water quality and marine biodiversity. I note that the dredging plume associated with the GDD project has been modelled based on the disposal regime to travel northwards and that dispersal of sediment plumes from either project are unlikely to coincide. Both projects simultaneously could give rise to disturbance / displacement impacts on marine mammals as result of underwater noise and vessel activity. I note that the CEMP Addendum requires that dredging activities for other development application number F21A/0368 and the proposed project will be required to be scheduled to occur at different times to avoid any adverse cumulative impacts which may occur on marine water quality as a result of increased suspended sediment from both projects. I am satisfied that this scheduling of construction works will also mitigate impacts of underwater noise and vessel activity on marine mammals.

10.9.18. Following the construction of the proposed WwTP, the inclusion of UV treatment for wastewater will not impact the marine biodiversity in the vicinity of the discharge. While reference is made to the potential discharge of untreated wastewater for a very short duration owing to a pumping failure in the proposed WwTP, this is qualified by stating that this risk is very unlikely and not expected to occur. This has caused some concern for third parties who raise this issue in submissions. I note the applicant's response to concerns raised in the Response to Submissions report at section 3.2.1.2.9 which states that it is standard practice in EIARs to outline the potential impacts in the absence of mitigation, and then consider the embedded design measures and mitigation measures in the EIAR, before stating the final residual impact is not expected to occur (i.e., the predicted impact). This matter was assessed in the Inspector's Report ABP-301908 which considered the simulated 3 day process failure and found that there is no credible risk to marine

---

<sup>1</sup> Howth Harbour development (ABP 314487) entails dredging of harbour, treatment of dredged material, reclamation of land, landscape reclaimed land, construction of slipway and construction of embankment and rock armour around reclaimed land at Howth Fishery Harbour Centre

water quality from partial or total failure scenarios taking into account the limited likelihood of such occurrences and the embedded mitigation. Having assessed the further information, I am satisfied that the conclusion of the Inspector APB-301908 stands

10.9.19. I am satisfied that the operational phase impacts of the proposed project on marine biodiversity features remain the same as reported in Chapter 9 of the EIAR in the 2018 planning application and as assessed in the Inspector's Report ABP-301908.

10.9.20. **Mitigation**

10.9.21. The updates to the project were deemed in the EIAR Addendum not to result in any additional impacts, above those identified in the original Chapter 9 of the EIAR, and no additional mitigation measures are considered necessary. The mitigation measures identified to address the significant effects, as per the EIA, remain and are detailed on page 180 of the Inspector's Report pertaining to ABP-301908. Save for scheduling of construction works of the proposed project and the permitted Howth Harbour development as detailed above which is detailed in the CEMP Addendum, I am satisfied that no other additional mitigation measures are necessary.

10.9.22. **Residual Effects**

10.9.23. The residual impacts remain as presented in this Section 9 of the original 2018 EIAR and as per the Inspector's Report ABP-301908. All potentially significant impacts have been reduced to negligible or minor residual impacts with mitigation.

10.9.24. **Assessment:**

10.9.25. Following consideration, there are no material changes to the assessment of biodiversity (marine section) as a result of any of the updates discussed in Addendum Chapter 9A of the EIAR. I consider the cumulative impacts in section 10.22 of this report and note the requirement for an additional environmental mitigation measure to mitigate impacts from another project, the Howth Harbour Development, should both projects be developed simultaneously.

10.9.26. Regarding third-party concerns relating to marine biodiversity, I consider that many of these issues were raised and addressed during the course of the Oral Hearing and subsequent Inspector's Report pertaining to ABP-301908. I consider the following substantive issues require consideration/clarification:

Dispersion of accumulated historical pollutants in the sediment: I am satisfied that this was considered in the original EIAR, section 18.5.3 refers. I note the comments from Dr. Knights (Specialist Report No. 2) which acknowledges that bore samples revealed "no evidence of contamination is made clear in their response, and that despite the absence of contamination, the impact assessment was classified as "moderate/slight", indicating the applicant has adopted the precautionary principle in their assessment and held themselves to a more conservative standard."

Simultaneous dredging and dredging profile: the proposed outfall pipeline (marine section) will involve the excavation of a trench within a 250m wide working corridor from the tunnel termination point out to the outfall location (approximately 4km), meaning there will not be works undertaken simultaneously at either end of the marine outfall. In addition, I am satisfied that the trench is outlined in the design included in the 2018 planning application which has not changed and is fully assessed in the EIAR.

Razor clam dredging & cumulative impact: Impact on razor clam and the impacts of dredging were considered in the original EIAR, chapter 9. On this specific issue, Dr. Knights notes (Specialist Report No. 2) that "dredging is a restricted inshore practice, regulated by the Sea Fisheries Protection Authority. Shellfish and dredging activities are referred to in the cumulative effects chapter, but razor clam are not directly referred to as they were originally screened out with the risk assessment concluding the shellfish areas (which include razor clam; see Table 9.16 - pg 49 of Chapter 9 for all species identified) were assessed as at low risk due to low magnitude and frequency of impact [from dredging plume or habitat loss] over a small area and assessed as 'negligible' significance" (pg 66 of the original EIAR refers). Dr. Knights notes that additional scientific literature further supports this assessment of no risk to shellfish stating that an example includes Legani et al. (1998)<sup>2</sup> who stated "Coliphage concentrations were significantly correlated with faecal indicators in

---

<sup>2</sup> Legani et al. (1998) Journal of Applied Microbiology, 85(5): 790-798.

marine waters ( $P < 0.001$ ) and sediments ( $P < 0.05$ ), but no correlation was found in shellfish, thus showing their low specificity as indicators of faecal pollution of human origin in shellfish of economic importance."

The only additional cumulative sources of impact on marine biodiversity identified relates to the Howth Harbour Development, as discussed above.

Adequacy of UV treatment: this is considered in section 10.15 below.

Shellfish water impacts: I further note the report of Dr. Antony Knights, Marine Ecologist, Specialist Report no. 2 refers, which states:

"Given best available evidence the original position that UV would not necessarily be needed (See Oral Hearing documents "UV Disinfection Response to Inspector statement) is supported. However the applicant's subsequent intention to apply UV treatment to effluent prior to discharge provides additional security to absolutely ensure that waters remain safe such that the classification of shellfish waters in the region are not undermined."

Marine water quality modelling: this is considered in section 10.15 below.

#### 10.9.27. **Conclusion**

10.9.28. I am satisfied that the proposed development would not have an adverse impact on marine biodiversity, subject to compliance with relevant legislation and guidance, implementation of the EIAR and EIAR Addendum mitigation measures and compliance with recommended conditions.

### 10.10. **Ornithology**

#### 10.10.1. **Issues Raised**

10.10.2. Dublin Airport Authority states that SUDS measures should not give rise to any increase in bird activity. It requests that a condition is attached to any grant of permission requiring the developer to agree any subsequent requirement for mitigation measures, should there be undue bird/wildlife hazards which only become apparent after completion of the proposed development.

10.10.3. The Department of Housing, Local Government & Heritage (DAU) reference the recent designation of the North-west Irish Sea cSPA, noting that the route of the

outfall pipeline from the Velvet Strand to the outfall discharge point off Ireland's Eye is encompassed in the new Natura site.

10.10.4. Some 2022 third party submissions raise concerns with respect to inadequate bird surveys, impact on bird life and the importance of Ireland's Eye as a feeding ground for sea birds is referenced. Concerns are raised that the proposal is contrary to the Birds Directive. 2024 submissions raise concerns with regard to bird strikes on inbound and outbound flights, that the sediment plume would disrupt foraging behaviour of seabirds; that vessels and construction noise would disturb seabirds, that the proposed development would result in a deterioration of water quality impacting bird life. Other matters relate to the NIS, the screening out of sites, impact on protected species of SPA's, including on Brent Geese and ex-situ impacts.

10.10.5. **Context**

10.10.6. EIAR Chapter 10 describes the potential effects of the proposed development on marine ornithology and Chapter 11 (in part) deals with terrestrial ornithology. The EIAR Addendum, Chapters 10A and 11A, reviews any material changes to the original EIAR chapters and provides additional surveys, data, literature sources or policy developments of relevance. Updated surveys were undertaken. The Addendum Chapters provide an assessment of the validity of earlier conclusions and any amendments to these.

10.10.7. Chapter 10A is supported by updated estuarine and Vantage Point (VP) surveys (baseline surveys); a Revised Vessel Management Plan; Written Responses to Biodiversity (Marine Ornithology) Queries at the 2019 Oral Hearing; and a Revised Natura Impact Statement (NIS). Chapter 11A is informed by breeding and winter bird surveys of farmland birds.

10.10.8. **Potential Significant Effects**

10.10.9. The Board will note that section 9.7.3.2 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to ornithology and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table



10.4 below. Potential significant additional effects arising from the additional information are considered in section 10.10.20 below.

<b>Table 10.4: Summary of potential significant effects (Ornithology)</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"> <li>The 'do nothing' scenario is likely to be of negligible significance as there would be no development arising.</li> </ul>	
<b>Construction</b>	
<ul style="list-style-type: none"> <li>Visual impacts affecting birds in an area up to 500m from microtunnelling compounds and resulting in disturbance / displacement. The areas which would be affected are large and the number of birds including many species which are SCIs of Baldoye Bay SPA and Ireland's Eye SPA are high. For these SCI's a Major Impact Significance is concluded. For the other birds found to use the area to be affected but which have a lower ecological value a Moderate or Minor Impact Significance may be concluded.</li> <li>Disturbance / displacement due to piling and vessel traffic associated with the interface and fibre optic crossing and the outfall pipeline work and the marine diffuser construction, which could affect a range of birds notably SCI's of Ireland's Eye SPA particularly auks and SCIs of Howth Head Coast SPA. The sensitivity of the relevant individual bird species to vessel traffic, the distances from activity where disturbance is likely and the likely presence of the species in the area including on the water during these activities are all outlined in detail. The area of disturbance overlaps with Ireland's Eye SPA. Generally, a Moderate Impact Significance.</li> <li>Potential for significant impacts on farmland birds during the construction of the GDD. Generally common and widespread species found in surveys.</li> </ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"> <li>There are no impacts predicted on ornithological interests during the Operational Phase. Therefore, the impact significance on all ornithological species is Negligible.</li> </ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"> <li>Decommissioning is not proposed.</li> </ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"> <li>None identified.</li> </ul>	

#### 10.10.10. **Changes to the Baseline**

10.10.11. Since the publication of the EIAR in the 2018 planning application, a new European site has been designated, the North-west Irish Sea candidate SPA, which the site transects, and new or updated conservation objectives have been adopted for the following SPAs:

- Ireland's Eye SPA;
- Howth Head Coast SPA;
- Lambay Island SPA;
- Dalkey Island SPA

- Skerries Island SPA.

#### Key Material Changes in Marine Ornithology

- 10.10.12. Surveys were carried out twice per month between September 2020 and August 2021, November 2021 and March 2022, and October 2022 and June 2023. The survey methodology and timeframe was based on the British Trust for Ornithology (BTO) Wetland Bird Survey (WeBS) and Irish WeBS (I-WeBS) methodology as outlined in Gilbert et al. (Gilbert et al. 1998) and BTO (2016a; 2016b) in the same manner that the surveys for the EIAR in the 2018 planning application were based. I am satisfied that the updated surveys are adequate to inform the EIAR Addendum.
- 10.10.13. The bird species present within the estuarine survey area during the surveys undertaken between 2020 and 2023 remain typical birds associated with the habitat types present, including wetted channels, the intertidal area and adjacent Velvet Strand beach and Portmarnock Golf Course. The species recorded, therefore, continue to be entirely in keeping with what would be anticipated, given the land uses and habitats.
- 10.10.14. The survey found that the numbers and distribution of the qualifying species for Baldoyle Bay SPA remains consistent with the findings reported in Chapter 10 (Biodiversity (Marine Ornithology)) in Volume 3 Part A of the EIAR in the 2018 planning application.
- 10.10.15. Other species of note, in conservation terms, are those listed under the Ireland's Eye SPA, Howth Head Coast SPA and North-west Irish Sea cSPA citations, which include herring gull, great black-backed gull, black guillemot, guillemot, kittiwake, shag, razorbill, peregrine falcon and fulmar. The numbers of species recorded between 2020 and 2023 are comparable, as would be expected given the relative consistency of habitats between these periods. Only fulmar, which was recorded as part of the baseline in Chapter 10 (Biodiversity (Marine Ornithology)) in Volume 3 Part A of the EIAR in the 2018 planning application, was not present during the surveys undertaken between 2020 and 2023.
- 10.10.16. The distribution of SPA qualifying marine bird species recorded from the Velvet Strand and Ireland's Eye VPs during the breeding season and wintering seasons are comparable to the results presented in the original EIAR. Species listed

as SCIs of Ireland's Eye SPA, Howth Head Coast SPA and / or North-west Irish Sea cSPA were observed during the breeding and wintering seasons, distributed across the VP viewing arcs.

- 10.10.17. The value of estuarine and marine bird features recorded along the proposed project therefore remains the same as presented in Chapter 10 (Biodiversity (Marine Ornithology)) in the original EIAR.

#### Key Material Changes in Terrestrial Ornithology

- 10.10.18. The bird species present within the 250m buffer of the proposed project boundary during the surveys undertaken between 2021 and 2023 remain typical common birds associated with highly modified agricultural landscapes, with open fields, hedgerows, treelines, pockets of woodland, drainage ditches, ponds and watercourses. The species recorded, therefore, continue to be entirely in keeping with what would be anticipated given the land uses and habitats. The breeding bird assemblage present remains an ecological feature of site level importance and remains unchanged from that reported in the EIAR in the 2018 planning application. As was reported in the EIAR in the 2018 planning application, there were no significant agglomerations of winter birds.

- 10.10.19. The updated surveys of farmland birds (section 11.3.5 of the EIAR Addendum) do not indicate any significant changes in baseline data from the 2018 planning application data.

#### 10.10.20. **Potential Effects per EIAR Addendum**

- 10.10.21. Having regard to the recent designation of the North-west Irish Sea cSPA, it is possible that vessels operating along the route of the proposed outfall pipeline route (marine section) and at or near the proposed marine diffuser have the potential to cause disturbance to SCI species. Vessel disturbance impacts could occur in the North-west Irish Sea cSPA from the microtunnelling / subsea interface, located approximately 600m offshore from Velvet Strand Beach, and terminating at the proposed marine diffuser. Two groups of vessels will be present between April and October moving along the proposed outfall pipeline route corridor, with any disturbance impacts being restricted to a localised area around each group of

vessels. The exact distance at which birds may be disturbed is dependent on a range of factors, with different species possessing varying sensitivity.

10.10.22. Other than the foregoing, there is no change to the predicted potential impacts outlined in this Section of the EIAR in the 2018 planning application, sections 10.5 and 11.5 relate.

10.10.23. **Mitigation**

10.10.24. Mitigation measures are set out in section 10.9 of the EIAR and require installation of a 2.4m high hoarding to protect estuarine birds to be used for the duration of the construction works at both microtunnelling compounds (proposed temporary construction compound no. 9 and no. 10. In addition, a vessel management plan is required to mitigate impact to guillemots and razorbills in July and August during construction. These measures remain.

10.10.25. A Vessel Management Plan was prepared and included as Appendix A10.2 in of the EIAR in the 2018 planning application, due to the potential for adverse impacts on site integrity during the time period that auks are leaving the Ireland's Eye breeding colony. The previous Vessel Management Plan has been revised, is appended to the EIAR Addendum (and revised NIS) and has two key functions. The first is to ensure that the Ireland's Eye SPA boundary is not unnecessarily approached or crossed by construction vessels working on the proposed marine diffuser and subsea section of the proposed outfall pipeline route (marine section) at any time during the construction phase. The second is to ensure the protection of rafting auks (guillemot and razorbill) which are both SCI species of both Ireland's Eye SPA and the North-west Irish Sea cSPA, when they are leaving the Ireland's Eye colony in July to mid-August at the end of the breeding season. A bird observer appointed by the contractor as part of adherence to the Revised Vessel Management Plan will notify the Marine Coordinator if there are any additional agglomerations of SCI species during their watching brief in place over the period July to August during the construction period.

10.10.26. A biodiversity enhancement measure is proposed with respect to farmland birds and is detailed in section 11.7.6 of the EIAR addendum and include artificial bird nesting structures at suitable locations which will be determined based on

locations available to erect the structures safely, and in the long-term, proximity to artificial lighting (no or little artificial light spillage areas to be favoured) and connectivity to optimal nesting and foraging habitats; and a minimum of eight bird boxes will be erected at each of the proposed WwTP and Abbotstown pumping station sites, respectively. The use of a range of boxes will provide additional nesting opportunities for a range of bird species.

**10.10.27. Residual Effects**

10.10.28. The residual impacts remain as presented in this Section 10.10 of the EIAR in the 2018 planning application and as per the Inspector's Report pertaining to ABP-301908. All potentially significant impacts have been reduced to negligible or not significant.

**10.10.29. Assessment:**

10.10.30. Following consideration, there are no material changes to the assessment of ornithology as a result of any of the updates discussed in Addendum Chapters 10A and 11A of the EIAR.

10.10.31. The AA section of my report assesses the impact of the proposed development on the North-west Irish Sea cSPA and concluded that subject to mitigation measures (i.e. implementation of the revised Vessel Management Plan) that the proposed development will not affect the attainment of conservation objectives of the North-west Irish Sea cSPA or other European Sites and adverse effects on sites integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

10.10.32. The DAA request a condition is attached to any grant of planning requiring the developer to agree with any subsequent requirement of the DAA / AirNav Ireland for mitigation measures, should there be undue wildlife / bird hazards. I am satisfied that the design of the proposed project has taken the location of Dublin Airport and its flight paths into consideration, that all tanks at the proposed WwTP and Abbotstown pumping station sites will be covered to prevent attracting birds during the operational phase and that the mitigation measures in the EIAR and Addendum and the Revised NIS are sufficient in this regard.

10.10.33. With respect to third party concerns – I am satisfied having regard to the Inspector's Report ABP-301908, the EIAR and EIAR Addendum that:

- the bird surveys are up-to-date;
- the impact on Brent Geese in particular ex-situ impacts is considered in the appended AA to this Inspector's Report, subject to mitigation measures there will be no significant impact on this species;
- the proposed development is not contrary to the Birds Directive. The proposed development is subject to EIA and AA processes in this regard.
- the mitigation measures are sufficient to prevent attracting birds during the operational phase,
- any disruption to the foraging behaviour of seabirds as a result of the sediment plume will be short-term. Similarly, any vessels and construction noise that could disturb seabirds will be short-term and not significant,
- the proposed development would not result in a deterioration of water quality impacting bird life.
- Other matters relate to the NIS, the screening out of sites (e.g. Howth Head Coast SPA) and protected species of SPAs and are considered in the appended AA to this Report.

10.10.34. **Conclusion**

10.10.35. I am satisfied that the proposed development would not have an adverse impact on marine or terrestrial ornithology, subject to compliance with relevant legislation and guidance, implementation of the EIAR and EIAR Addendum mitigation measures, and compliance with recommended conditions.

## **Terrestrial & Freshwater Aquatic Biodiversity**

### **10.11. Terrestrial Biodiversity**

#### **10.11.1. Issues Raised**

10.11.2. The Department of Housing, Local Government and Heritage 2024 submission is summarised above in section 4.2 of this Inspector's Addendum report. A number of prior to commencement conditions are recommended and include a requirement for a badger conservation plan, an amphibian conservation plan, the establishment of one or more new ponds adjoining the sewer route, and translocating elements of and amphibian species, frog and smooth newt, plant communities to new ponds.

10.11.3. Third party submissions raise concerns regarding impact of the proposed WwTp on wildlife and biodiversity, including frogs, and newts. 2022 submissions raised concerns regarding outdated surveys and impact on wildlife, including Annex V species and referencing the Sillogue Nature Development site. A 2022 submission (Joyce Kemper) references a rare species of *Tolypella Intricata* (otherwise known as stonewort or *Chara*) and refers to Appendix A10 of her submission, which includes a brief report (dated 2022) from Michael Keating which states that the Ballymun Wildlife Group has added new significant frog breeding on the ponds and references an important flora find in various rare Stonewort's at the 'abandoned lands adjacent to the north and west of Northpoint, Ballymun'. He states that a primary plant survey was conducted at the NCT wetlands with NPWS in May 2022 and provides a list of flora/*chara* species compiled in May 2022. Appendix A10 also includes a copy of the Ballymun Biodiversity Action Plan prepared by Dr. Mary Tubridy, dated March 2022. This Plan highlighted findings of a rare stonewort of international interest to botanists in Ballymun.

10.11.4. **Context**

10.11.5. EIAR Chapter 11 describes the potential effects of the proposed development on terrestrial biodiversity. The EIAR Addendum, Chapter 11A, reviews any material changes to the original EIAR chapters and provides additional surveys, data, literature sources or policy developments of relevance. Updated field surveys were undertaken. The Addendum Chapter provides an assessment of the validity of earlier conclusions and any amendments to these.

10.11.6. Chapter 11A is supported by a badger survey report, an updated terrestrial baseline survey report and the Oral Hearing response to biodiversity (terrestrial) queries.

#### 10.11.7. **Potential Significant Effects**

10.11.8. The Board will note that section 9.7.3.3 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to terrestrial biodiversity and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.5 below. Potential significant additional effects arising from the additional information are considered in section 10.11.17 below.

<b>Table 10.5: Summary of potential significant effects (Terrestrial Biodiversity)</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"><li>The 'do nothing' scenario would result in terrestrial flora and fauna persisting under its current land use and management regimes. The impact is neutral upon terrestrial biodiversity features.</li></ul>	
<b>Construction</b>	
<ul style="list-style-type: none"><li>Habitat impacts including loss of a wet grassland at Kildonan.</li><li>Habitat impacts related to loss of hedgerows, trees and scrub along the pipeline.</li><li>Impacts on protected species and which require licence from NPWS including smooth newt, bats, common frog and badger, including at the lands at Northpoint..</li><li>Disturbance or reduction of habitat for farmland birds and bats.</li></ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"><li>None identified.</li></ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"><li>Decommissioning is not proposed.</li></ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"><li>No significant cumulative effect on terrestrial biodiversity is likely.</li></ul>	

#### 10.11.9. **Changes to the Baseline**

10.11.10. Updated field surveys were undertaken as part of the preparation of this EIAR Addendum. The update surveys were completed between 2019 and 2023. In October and November 2022, a walkover survey was conducted during daylight hours along and extending 50m around each component of the Proposed Project boundary. An Invasive Alien Plant Species (IAPS) survey was undertaken to determine the presence / likely absence of IAPS. In 2023, during the badger surveys (17 to 19 April) and freshwater aquatic surveys (12 and 13 June), all incidental records of IAPS were also recorded. Four types of bat survey were undertaken for the Addendum assessment:

- Walked Transect Survey (September 2020, and May to September 2021);



- Static Bat Detector Surveys (April to August 2021);
- Preliminary Bat Roost Assessment (PBRA) of Trees (from ground level) (October to November 2022); and
- Aerial Bat Roost Feature Inspections of Trees (November to December 2022).

A badger survey was conducted along an area 50m each side of the Proposed Project boundary on 28 and 29 October 2020. The surveys were undertaken during daylight hours commencing at approximately 09.00hrs and finishing at approximately 16.30hrs (or as darkness precluded viable searching) and were completed over the course of two days.

Presence / absence newt surveys, completed under NPWS licence C 124/2021, were carried out at three locations in April and May 2021, and again in April and May 2023.

Freshwater aquatic surveys were completed over two days on 1 and 2 September 2021 and repeated on 12 and 13 June 2023. The locations that were surveyed where water bodies crossed the Proposed Project boundary.

10.11.11. I am satisfied with the scope and methodology used for the updated which have informed the EIAR Addendum.

10.11.12. During the updated habitat survey, some changes in habitat type were noted along the project boundary, these are:

- Areas of amenity grassland being developed on or allowed to go unmanaged;
- Areas of arable crops are now improved agricultural grassland or still tilled land;
- Horticultural land is now arable crops or improved agricultural grassland;
- Immature woodland is now (mixed) broadleaved woodland; and
- Many areas of improved agricultural grassland have been left unmanaged and allowed to go rank.

10.11.13. Instances of Japanese knotweed previously recorded within the redline boundary were not found however one new instance of Japanese knotweed was

recorded at the proposed WwTP site. Giant hogweed was still present near the NCT centre.

10.11.14. Additional badger sets have been recorded in the badger survey.

10.11.15. The previous bat surveys found older trees within the hedgerows of the improved grassland and arable land with potential roosting opportunities, of only low suitability. In the 2022 survey, two trees of moderate suitability were recorded in hedgerows. Previous bat surveys found mature broadleaved trees of moderate potential for roosting bats within the broadleaved woodland at Blanchardstown and Abbotstown. No roosting bats were found however in the trees with potential roosting features in the 2022 surveys. Nathusius' pipistrelle, recorded in the 2022 surveys, was not recorded in earlier surveys.

10.11.16. Additional waterbodies were found to have smooth newts.

10.11.17. The Fingal Biodiversity Action Plan 2023 – 2030 has been adopted.

10.11.18. **Potential Effects per EIAR Addendum**

10.11.19. Construction Phase impacts of the Proposed Project on terrestrial biodiversity features remain largely the same as reported in Chapter 11 (Biodiversity (Terrestrial and Freshwater Aquatic)) of the EIAR in the 2018 planning application, with some exceptions, as outlined below:

- Spread of non-native invasive giant hogweed. The EIAR addendum states that it is being actively managed by Uisce Éireann under a treatment regime commissioned in 2020.
- More trees have now been identified along the proposed orbital sewer route at Blanchardstown, Dubber and Clonsaugh, as potentially accommodating bat roosting features within them. Surveys indicate eight trees now categorised as having moderate potential and one tree now categorised as having high potential. No other changes occur in relation to potential impacts on bats.
- Eighteen badger setts have now been identified within 100m of the proposed project boundary. The location of these have been provided in a confidential Appendix to the EIAR Addendum (Appendix A11.1). In the EIAR in the 2018 planning application, five badger setts required closure (two temporarily and

three permanently). All were outlier setts and none were main breeding setts. Following update surveys, six badger setts now require closure (four temporarily and two permanently). All are outlier setts and none of these setts have been characterised as a main breeding sett or an annex sett to a main breeding sett. A further eight badger setts require protection and monitoring during construction.

- Smooth newt remains a protected species present at the Coldwinters site. No significant impact is predicted upon the local population of this protected species. However, in the absence of any special measures taken to avoid mortality of any individuals of a protected species, these ponds used by smooth newt would be disturbed or destroyed.

10.11.20. The operational stage does not result in any new or additional effects on terrestrial biodiversity.

10.11.21. **Mitigation**

10.11.22. As part of biodiversity enhancement, the following measures are proposed:

- All habitats that are within the redline boundary and are to be retained during the construction phase (including hedgerows, drainage ditches and other water features at the edge of the redline boundary) will be protected in advance of, and during construction, to avoid any incursion into them by personnel, construction plant or materials and to avoid and minimise any changes to the quality of those habitats.
- A Biodiversity Implementation and Monitoring Plan will be prepared by the appointed contractor and the EcCoW, in consultation with Uisce Éireann, prior to the commencement of construction and implemented thereafter. All measures will include specifications for the creation and restoration of all habitats identified, cross-referencing, as appropriate, to the relevant Landscape Management Plans. Provision will be made for the creation of immature woodland, dry meadows and scrub within the site, the creation of a drainage ditch along the south boundary of the site, and the creation / protection of hedgerows along the access / egress roads at the proposed WwTP site.

- Prior to construction / removal of hedgerows, the appointed EcCoW will be required to identify hedgerows of greater value that are suitable for transplanting or use in restoration, and / or any salvageable biodiversity materials which can be used.
- As committed to during the Oral Hearing in 2019, the amenity grassland at Compound no. 10 will be restored for dune habitat.
- Artificial bat roosting structures will be erected at the end of the construction phase and in suitable locations to be determined by the appointed Ecological Clerk of Works (EcCoW).
- A minimum of eight bat boxes will be erected at each of the proposed WwTP and Abbotstown pumping station sites, respectively.
- Up-to-date surveys now require a wildlife disturbance licence to be obtained from the NPWS for the exclusion and closure of six badger setts (previously 5 no.).

10.11.23. A Biodiversity Assessment (Appendix 2 of the Planning Report) has been prepared in response to which the applicant has updated the Landscape Mitigation Plans at the proposed WwTP and pumping station sites to provide an annotation of the biodiversity assessment figures (refer to Figure 12.1 and Figure 12.2 in Volume 5A of the EIAR Addendum).

10.11.24. As stated above, a 2022 submission raised concerns for the impact on *Tolypella Intricata*, also referred to, in the submission, as *Chara* and stone-wort or stonewort and which were found close to the NCT centre at Ballymun. The Development Applications Unit (DAU) addresses the concerns raised by the Ballymun Biodiversity Action and refers to the site visit in May 2022 by NPWS, specifically an aquatic ecologist expert and a consultant freshwater botanist who identified various plant species occurring in the ponds, stating that the most interesting plant species found to be present was fen pondweed, noting that typically “this species occurs with various species of stone-worts and four *Chara* spp. of this plant group were also found to occur in the ponds”.

10.11.25. In relation to badgers, the DAU submission stated inter-alia, that in order to avoid the injury or death of badgers any interference with or the destruction of a sett

must consequently be regulated by the attachment of conditions to the permission granted by the planning authority for the relevant proposed development.

10.11.26. In relation to the common frog the DAU stated that there is no mention of their presence or that they were surveyed for considering their presence to be almost certain at Coldwinters, possibly at Toberbunny and elsewhere on the orbital sewer route.

10.11.27. Noting the above, the DAU, in its submission of 2024 recommend specific conditions relating to the preparation of a badger conservation plan to be agreed prior to commencement; an amphibian conservation plan to be agreed prior to commencement; and the establishment of one or more ponds adjoining the route of the orbital sewer and translocation of existing plan community in ponds currently located in the site and which will be impacted by the proposed development, in particular plants of the fen pondweed. An additional environmental mitigation measure to this effect is included in the schedule of conditions for the Board's consideration

10.11.28. I note that the Response to Submissions Report (2024) confirms amphibian surveys were conducted in accordance with published guidance and followed the methodology licensed by the National Parks and Wildlife Service (NPWS) and states that each waterbody was surveyed for the presence of frogs, confirming that drainage ditches along the proposed orbital sewer route between Blanchardstown to Clonsaugh were found to be breeding sites for common frog. The Applicant further clarified that fen pondweed (*Potamogeton coloratus*) was not encountered during surveys undertaken for the 2018 EIAR or the 2023 EIAR Addendum, and was therefore not discussed in either EIAR, but that pre-construction survey will be undertaken and appropriate mitigation measures put in place, such as translocation. To this end, I am satisfied that the DAU's recommended conditions address concerns raised in relation to frogs, newts and fen pondweed and other typically occurring plants.

10.11.29. The other mitigation measures remain as presented in this Section 11.7 of the EIAR in the 2018 planning application and as per the Inspector's Report ABP-301908.

10.11.30. **Residual Effects**

10.11.31. The mitigation measures originally proposed remain valid and appropriate, and when the additional mitigation measures outlined in Section 11.7 above are implemented, the residual impact on the following categories will be improved compared to those presented in this Section of the original EIAR, specifically:

- The '(Mixed) broadleaved woodland, scrub, hedgerows and treelines' category – from no impact to minor beneficial.
- The 'fixed dune habitat at Portmarnock' category - from no impact to minor beneficial.

10.11.32. **Assessment:**

10.11.33. There have been no new adverse effect pathways identified in the EIAR Addendum assessment or effects of a greater magnitude or greater adverse significance identified in the EIAR Addendum assessment, in relation to terrestrial biodiversity, when compared to the findings of Chapter 11 relating to terrestrial biodiversity of the EIAR in the 2018 planning application.

10.11.34. As detailed above, the Department request a number of 'prior to commencement' conditions relating to a badger conservation plan, amphibian conservation plan, the establishment of one or more new ponds adjoining the sewer route, and translocating elements of and amphibian species, frog and smooth newt, plant communities to new ponds. The applicant was afforded an opportunity to comment of the DAU's submissions and raised no objection to the proposed conditions, which were broadly similar to those recommended in the Inspector's Report ABP-301908. As detailed above, I have provided for this in the attached schedule of conditions.

10.11.35. The mitigation measures and additional measures proposed by the DAU will ensure that positive green infrastructure and biodiversity gains are delivered.

10.11.36. With respect to third party concerns – I am satisfied having regard to the Inspector's Report ABP-301908, the EIAR and EIAR Addendum that:

- impact of the proposed WwTP on wildlife and biodiversity has been adequately assessed in the EIAR, EIAR Addendum, in the EIA and in this Addendum Report, including the impact on frogs and newts;
- the EIAR Addendum on terrestrial biodiversity is informed by updated surveys.

#### 10.11.37. **Conclusion**

10.11.38. I am satisfied that the proposed development would not have an adverse impact on terrestrial biodiversity, subject to compliance with relevant legislation and guidance, implementation of the EIAR mitigation measures, and compliance with recommended conditions.

### 10.12. **Freshwater Aquatic Biodiversity**

#### 10.12.1. **Issues Raised**

10.12.2. Third parties raise concerns regarding impact on fish, European eel and salmon via Baldoyle estuary and salmonoid rivers and considered that the impact was inadequately assessed in the EIAR, and that the WFD Assessment must include impact on fish. The impact of the new culvert on habitats and species is queried.

#### 10.12.3. **Context**

10.12.4. EIAR Chapter 11 describes the potential effects of the proposed development on freshwater aquatic biodiversity. The EIAR Addendum, Chapter 11A, reviews any material changes to the original EIAR chapter and provides additional surveys, data, literature sources or policy developments of relevance. Updated freshwater aquatic surveys were undertaken. The Addendum Chapter provide an assessment of the validity of earlier conclusions and any amendments to these.

10.12.5. Chapter 11A is supported by an updated freshwater aquatic baseline survey report and the Oral Hearing response to biodiversity (terrestrial and freshwater aquatic) queries.

10.12.6. Of relevance, is the proposal to extend the River Mayne culvert along the proposed access road to the proposed WwTP (from 21m to 25m) which formed part

of the additional information submitted to the Board in October 2023. The Board will note that the extended culvert was the matter of some discussion at the Oral Hearing, was considered in the Inspector's Report ABP-301908 and recommended as a condition in the schedule of conditions (no. 11 refers).

#### 10.12.7. **Potential Significant Effects**

10.12.8. Section 11.10 and 11.11 of the EIAR sets out potential impacts of the GDD project in relation to freshwater aquatic biodiversity. The Board will note that section 9.7.3.4 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to freshwater aquatic biodiversity and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.6 below. Potential significant additional effects arising from the additional information are considered in section 10.12.16 below.

<b>Table 10.6: Summary of potential significant effects (Freshwater Aquatic Biodiversity)</b>
<b>Do Nothing</b>
<ul style="list-style-type: none"> <li>The 'do nothing' scenario would result in continued activity within the proposed project boundary which may include further urbanisation, airport activities and intensive agriculture with resulting indirect impacts to the downstream marine environment. This would result in the freshwater biodiversity along the proposed project route potentially remaining as it is at present or potentially being impacted further in terms of its ecological status classification</li> </ul>
<b>Construction</b>
<ul style="list-style-type: none"> <li>Impacts including on downstream marine sites through contamination in the construction phase.</li> <li>Introduction of invasive species including to downstream protected sites.</li> <li>Suspended solids pollution is an issue throughout the project including at the temporary compounds, 19 no. outfalls to ditches etc, at the stream crossings and at earthworks locations notably at APS and the WwTP / SHC sites.</li> <li>The crossing of all watercourses associated with the orbital sewer route using trenchless methods. Risks of air break out, bentonite blow out, sedimentation, interception of hyporheic zone and noise impacts on fish are identified. These events if they occurred would in themselves constitute impacts which would need to be addressed including for example the requirement to treat large volumes of sediment laden waters.</li> <li>Impacts related to spillages of fuels or concrete, wash-down and dust.</li> <li>Potential impacts from above include significant effects on habitats and fish.</li> <li>The Mayne crossing at the Clonsaugh site entrance road by culvert can be associated with potential obstruction of fish and aquatic fauna as well as a reduction in vegetation and habitat. The culvert and bridge construction are</li> </ul>



described as moderately negative on a local scale but permanent. There is also a degree of certainty that such impacts will occur.
<ul style="list-style-type: none"> <li>There are potential changes to the catchment hydrology due to increases in hard standing and access roads and buildings. In the absence of mitigation these could impact downstream areas. Hydraulic impacts would be moderate negative or slight negative.</li> </ul>
<b>Operational Impacts</b>
<ul style="list-style-type: none"> <li>In the operation phase the potential significant impacts also includes pollution of the watercourses and downstream areas including from leakage or spillages of untreated wastewater. Observers have referred to these issues being under-estimated.</li> </ul>
<b>Decommissioning</b>
<ul style="list-style-type: none"> <li>Decommissioning is not proposed.</li> </ul>
<b>Cumulative Impacts</b>
<ul style="list-style-type: none"> <li>There is potential for significant cumulative effect could give rise to cumulative effects on water quality and on the wider environment. Subject to adherence to measures set out in the CEMP and to the implementation of effective surface water management there would not be significant cumulative effects on water and / or on related ecology or environmental resources.</li> </ul>

#### 10.12.9. **Changes to the Baseline**

10.12.10. Overall, minor changes in the baseline were observed between the surveys undertaken in 2017 and 2021/2023. No significant changes in the baseline were noted between the 2021 and 2023 surveys. The only exception was location 1b (downstream of Abbotstown bridge), as the survey location was corrected in 2023 from the mainstem of the River Tolka to a small tributary of the River Tolka.

10.12.11. A key change in water quality was an improvement observed at Location 5 (located on the Mayne), where the inferred Q-value improved from 'Q2' (seriously polluted/bad WFD status) to 'Q3' (moderately polluted/poor WFD status) and 'Q2-3' (moderately polluted/poor WFD status) in the years 2017, 2021 and 2023. Despite this improvement, however, water quality remains unsatisfactory at this location.

10.12.12. Similarly, the habitat assessment for fish and crayfish did not change significantly and rarely deviated by more than one rating on the categorical scale used (None/Poor/Fair/Good/Very Good/Excellent). Location 1c (mainstem of the River Tolka) saw an overall reduction in suitability over the years 2021 and 2023 since the 2017 survey for juvenile salmonids and juvenile lamprey. Habitat condition deteriorated at Location 3 (upper reaches of the Mayne River) since 2017, and consequently, habitat suitability for fish and crayfish reduced from 'Poor' (in 2017) to 'None' (in 2021 and 2023). Location 4 (on the Cuckoo Stream) saw a reduction in suitability for crayfish habitat since the 2017 survey ('Good' habitat was recorded at

this site in 2017, whereas 'Poor-Fair' and 'Fair' were recorded in 2021 and 2023 respectively). However, a slight improvement in habitat suitability for fish was observed at location 4 where suitability was recorded as 'Poor' for all species and life stages in 2017 and 'Fair' in 2023 for all species and life stages. Despite the observed improvement in water quality at location 5 since 2017, habitat suitability for fish and crayfish improved in 2021, but disimproved in 2023.

10.12.13. Differences observed are likely a result of slight differences in survey location (due to access, dense vegetation growth etc), potential differences in surveyor Judgment (mainly for the fish and crayfish habitat assessment) and temporal variation in local conditions and river habitat.

10.12.14. Overall, with the exception of the River Tolka in 2017, river habitat, water quality and suitability of the various survey locations for fish was sub-optimal across all locations in all survey years. 'Good' juvenile salmonid and 'Good' juvenile lamprey habitat was recorded in the River Tolka in 2017. Habitat suitability for white-clawed crayfish was also typically suboptimal across all locations and all survey years, with the exception of location 1c and 4. 'Good' white-clawed crayfish habitat was recorded at location 1c in 2017 and 2023, and location 4 in 2017.

10.12.15. I note that since the receipt of further information (October 2023) that Ireland's 3<sup>rd</sup> River Basin Management Plan, Water Action Plan 2024, has been prepared and adopted. Of note, Tolka/Liffey catchment is identified as a catchment that needs reduction in nitrogen concentrations; the majority of the nitrogen in Liffey/Tolka catchment, which incorporates Dublin City, is from urban wastewater. Appendix 1 of the Water Action Plan contains the Programme of Measures, which includes delivery of urban wastewater projects by Uisce Éireann listed in Appendix 6 wherein the delivery of the GDD project is listed.

10.12.16. **Potential Effects per EIAR Addendum**

10.12.17. Considering the updated proposed project elements there are no changes to the information presented in this Section of the EIAR in the 2018 planning application. The nature and scale of development remains as outlined in the 2018 planning application, and the methods to be used to construct and operate the proposed project also remain as proposed in the 2018 planning application.

10.12.18.      **Mitigation**

10.12.19.      There are no changes to the information presented in this Section of the EIAR in the 2018 planning application.

10.12.20.      **Residual Effects**

10.12.21.      There have been no new residual impacts, or residual impacts of a greater magnitude or greater adverse significance identified when compared to the EIAR in the 2018 planning application. It remains the case that there are no likely significant residual impacts on freshwater aquatic biodiversity from the construction or operation of the GDD.

10.12.22.      **Assessment:**

10.12.23.      There have been no new adverse effect pathways identified in the EIAR Addendum assessment or effects of a greater magnitude or greater adverse significance identified in the EIAR Addendum assessment, in relation to freshwater aquatic biodiversity, when compared to the findings of Chapter 11 of the EIAR in the 2018 planning application.

10.12.24.      Third party concerns were raised with regard to impacts on the European eel. I note the applicant's response that impacts from dredging and micro-tunnelling on European Eel forms part of the assessment undertaken in respect of 'migratory fish' which concludes that any impacts will be short-term and of negligible significance. I note that all inshore fish species were assessed via various survey means in and around the proposed outfall survey route as well as around the entrance to the Baldoyle Estuary and that no physical, chemical or bathymetric changes are impacts are expected within the estuary as a result of the proposed project. Impact on freshwater aquatic fish species has been adequately assessed in the EIA of the Inspector's Report ABP-301908 and the proposed further information does not alter the conclusions of the Inspector ABP-301908.

10.12.25.      **Conclusion**

10.12.26.      I am satisfied that the proposed development would not have an adverse impact on freshwater aquatic biodiversity, subject to compliance with relevant

legislation and guidance, implementation of the EIAR mitigation measures, and compliance with recommended conditions.

## **Land, Soil, Water, Air and Climate**

### **10.13. Land & Soil**

#### **10.13.1. Issues Raised**

10.13.2. Third parties raised concerns with respect to the following:

- Orbital sewer excavation on the boundary of the Dublin Airport Campus and potential to encounter contaminated soil;
- No identification of lands that sludge will be spread is presented.
- DAA wayleaves could inhibit future development of airport lands particularly to the east of the R132.
- There is no major fault at Portmarnock but fails to identify any faults that are not major.
- Concern is also raised with respect to bentonite breakout and air venting occurring at the marine base outfall section.
- There is no discussion of accumulated historical pollutants in the sediment that may be dispersed during dredging and the potential impact on marine life through bioaccumulation.

#### **10.13.3. Context**

10.13.4. EIAR Chapter 18 describes the potential effects of the proposed development on freshwater aquatic biodiversity. The EIAR Addendum, Chapter 18A, reviews any material changes to the original EIAR chapter and provides additional surveys, data, literature sources or policy developments of relevance. The Addendum Chapter provide an assessment of the validity of earlier conclusions and any amendments to these. Chapter 18A is supported by the Oral Hearing response to soils and geology queries.

#### 10.13.5. **Potential Significant Effects**

10.13.6. The Board will note that section 18.5 and 18.6 of the EIAR sets out potential impacts of the GDD project in relation to land and soil and section 9.7.4.1 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to land and soil and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.7 below. Potential significant additional effects arising from the additional information are considered in section 10.13.9 below.

<b>Table 10.7: Summary of potential significant effects (Land and Soil)</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"><li>The 'do nothing' scenario would result in continued activity within the proposed project boundary which may include further urbanisation, airport activities and intensive agriculture with resulting impacts to land and soil.</li></ul>	
<b>Construction</b>	
<ul style="list-style-type: none"><li>Permanent loss of agricultural lands.</li><li>Sterilisation of aggregates or bedrock resources. This includes impacts which would affect the potential expansion of Huntstown Quarry.</li><li>Potential to encounter contaminated soils at the locations shown on figures 18.3 sheets 1-3, which includes various crossing points of the project.</li><li>Potential to encounter soft ground / marine sediments, notably at the crossings of Cuckoo Stream and close to the coast.</li><li>Impacts on marine environment and ecology including protected areas as a result of mobilisation of contaminants.</li></ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"><li>The operational phase of the proposed pipeline routes will have an overall neutral long-term impact on the soils and geology along the routes; no potential significant effects.</li></ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"><li>Decommissioning is not proposed.</li></ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"><li>None identified.</li></ul>	

#### 10.13.7. **Changes to the Baseline**

10.13.8. Section 18.3 of the EIAR Addendum describes any changes to the baseline environment. A number of insignificant clarifications are made e.g. one area of made ground was encountered during the 2020 ground investigation in close proximity to the R139 Road at BH259 to a depth of 0.9mBGL; the depth to bedrock in the area of the proposed WwTP was confirmed at ca.29mBLG at boreholes. The Conceptual Site Model was revisited and there was no change.

**10.13.9. Potential Effects per EIAR Addendum**

10.13.10. Considering the updated proposed project elements there are no changes to the information presented in this Section of the EIAR in the 2018 planning application. The nature and scale of development remains as outlined in the 2018 planning application, and the methods to be used to construct and operate the proposed project also remain as proposed in the 2018 planning application.

10.13.11. The Response to Submissions prepared by the applicant deals with concerns raised by third parties. With respect to Dublin airport PFAS contamination, the applicant states that this was not an issue which it had been specifically aware of prior to receipt of this submission, and it is not therefore considered in the Application or the Addendum. It notes that proposed amendments to the WFD, the Groundwater Directive and the Environmental Quality Standards Directive with limits for PFAS in groundwater and surface water and the recast Urban Waste Water Treatment Directive agreed text includes additional responsibilities of Member States in the areas of monitoring for a range of chemicals, including PFAS. The applicant confirms that it will comply with such requirements as are imposed on it pursuant to the Directives by Irish law.

10.13.12. I note that the applicant has anticipated the possibility of encountering contaminated waste as part of the material to be excavated and has confirmed that contaminated ground, if encountered, will require excavation and removal off-site to a suitably licensed waste facility, the management of which will be detailed in the CEMP and Construction Waste Management Plan.

10.13.13. Third parties also raise concern with respect to land spreading of sewage sludge. The Board will note that the sludges generated will be processed to produce a 'biosolid' end product suitable for reuse in agriculture (with the biogas produced during the treatment process used on-site for energy recovery) which will be transported to and stored in the permitted Regional Biosolids Storage Facility (RBSF) via the road network in covered trucks. This issue was considered in the 2018 application documentation and the Inspector's Report ABP-301908 and is not relevant in terms of the content of the further information as regards the proposed modifications to the proposed development i.e. UV treatment and extended culvert. I also note the following, as confirmed in the EIAR Addendum Volume 4A Part A

RSBF EIAR Addendum and the applicant's response to submissions, which I consider addresses concerns relating to land spreading:

- Wet Uisce Éireann wastewater sludge is treated to comply with the requirements of the Sewage Sludge Directive 86/278/EEC;
- Land spreading is managed in accordance with the associated Nutrient Management Plans, approved and monitored by the Environment Section of the relevant Local Authority.
- The 'application to land' of 'fertiliser' is regulated by the European Union (Good Agricultural Practice for Protection of Waters) Regulations 2022 [the GAP Regulations]. This is enforced by local authorities and the Environmental Protection Agency.
- The storage of biosolids is governed by S.I. 32 of 2010 Waste Management (Registration of sewage sludge facility) Regulations.
- The use of sewage sludge and biosolids generated at Uisce Éireann plants is managed by Uisce Éireann through its National Wastewater Sludge Management Plan 2022 – 2027.

10.13.14. On the issue of geological faults, faults were identified from available geological mapping of the area from the Geological Survey of Ireland (GSI). No faults (major or minor) were identified within the proposed outfall pipeline route (marine section).

10.13.15. On the issue of accumulated historical pollutants in the bed sediment and potential mobilisation, I note that Section 18.5.3 of Chapter 18 (Soils and Geology) and I am satisfied that no new issues arise with respect to the additional information submitted by the applicant or third parties.

10.13.16. **Mitigation**

10.13.17. There are no changes to the information presented in this Section of the EIAR in the 2018 planning application.

10.13.18. **Residual Effects**

10.13.19. There have been no new residual impacts, or residual impacts of a greater magnitude or greater adverse significance identified when compared to the EIAR in the 2018 planning application. It remains the case that there are no significant residual impacts on land and soil from the construction or operation of the GDD.

10.13.20. **Assessment:**

10.13.21. Following consideration, there are no material changes to the assessment of land and soil as a result of any of the updates discussed in Addendum Chapter 18A of the EIAR.

10.13.22. **Conclusion**

10.13.23. I am satisfied that the proposed development would not have an adverse impact on land and soil, subject to compliance with relevant legislation and guidance, implementation of the EIAR mitigation measures, and compliance with recommended conditions.

10.14. **Water (Hydrology and Hydrogeology)**

10.14.1. **Issues Raised**

10.14.2. Third parties raise concerns with respect to toxic contamination of PFAS in the River Mayne, Cuckoo Stream and River Sluice which the Dublin Airport Campus drains into. Reference is made to the Airport Drainage Area Plan which includes partial treatment of contaminated surface water and then discharged to the North Fringe Sewer and so will make up the influent at the GDD WwTP.

10.14.3. It is also stated by third parties that no overflows were shown on the proposed orbital sewer. It also stated that Section 4 discharges to the River Tolka and rivers connected to the Ballymun Pumping Station must be modelled in addition to wastewater discharge licence overflows.

10.14.4. A third party states that the EPA methodology to assign status to previously unassigned water bodies is not legally sound; further assessment under WFD and public consultation should be carried out.



10.14.5. The Iarnród Éireann submissions request that the integrity and functionality of any existing historical drainage channel running parallel to the railway not be affected by any temporary or permanent works.

10.14.6. **Context**

10.14.7. EIAR Chapter 17 describes the potential effects of the proposed development on freshwater aquatic biodiversity. The EIAR Addendum, Chapter 17A, reviews any material changes to the original EIAR chapter and provides additional surveys, data, literature sources or policy developments of relevance. The Addendum Chapter provide an assessment of the validity of earlier conclusions and any amendments to these.

10.14.8. The proposed inclusion of UV treatment will result in an improvement on the bacteriological quality of the treated wastewater discharged into the Irish Sea (refer to section 10.15 Marine Water Quality below). Any change in the predicted impact on marine water quality is addressed in the following EIA section relating to marine water quality.

10.14.9. The culvert will be extended by 4m from the original 21m presented in the 2018 planning application to 25m. The proposed culvert extension remains within the planning boundary submitted in the 2018 planning application and is presented in Addendum Planning Drawing Numbers 32102902-2148 and 32102902-2149.. The EIAR Addendum states the extension of the culvert by 4m will result in no material change to the effects outlined this Section of the EIAR in the 2018 planning application.

10.14.10. **Potential Significant Effects**

10.14.11. The Board will note that section 17.6 of the EIAR sets out potential impacts of the GDD project in relation to hydrology and hydrogeology and section 9.7.4.4 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to water and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are

summarised in Table 10.8 below. Potential significant additional effects arising from the additional information are considered in section 10.14.19 below.

<b>Table 10.8: Summary of potential significant effects (on water – hydrology and hydrodeology)</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"> <li>The 'do nothing' scenario would result in continued activity and drainage within the proposed project boundary which may include drainage proposals and actions.</li> </ul>	
<b>Construction</b>	
<ul style="list-style-type: none"> <li>Potential that during construction of Abbotstown Pumping Station and WwTP/SHC sites increased risk of flooding. Slight Impact.</li> <li>Potential for deterioration of water quality due to contaminants in runoff. Could impact on Cuckoo, Tolka, Mayne, Sluice and Santry watercourses which includes waters entering Baldoyle estuary. Slight Impact.</li> <li>Potential for flooding and contamination associated with Compound 10, which is in Flood Zone A and is immediately adjacent ecologically sensitive sites including European sites. This would be a Significant Impact.</li> <li>Risks associated with construction phase dewatering - limited to small areas. This is not a significant impact due to limited amount of dewatering and short duration and use of wells and availability of alternative supplies. Not Significant Impact.</li> <li>Similarly, the risks associated with groundwater contamination in construction and operation would be classified as not being of significance for the same reasons. Not Significant Impact.</li> <li>Potential to alter the flow regime as a result of largescale project.</li> </ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"> <li>None identified</li> </ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"> <li>Decommissioning is not proposed.</li> </ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"> <li>There is potential for significant cumulative effect could give rise to cumulative effects on water quality and on the wider environment. Subject to adherence to measures set out in the CEMP and to the implementation of effective surface water management there would not be significant cumulative effects on water and / or on related ecology or environmental resources.</li> </ul>	

#### 10.14.12. **Changes to the Baseline**

10.14.13. The Water Framework Directive (WFD) status of water bodies has been updated by the EPA since the submission of the 2018 planning application. The only change in status relevant to the study area for the proposed project is to the River Sluice which previously had an 'unassigned' status and is now classified as having a 'Poor' water quality status. Its risk of not achieving 'Good' water quality status is currently under review.

10.14.14. The WFD status of water bodies have been updated since the submission of the 2018 planning application, with the following changes noted under coastal and estuarine water bodies:

- The status of Mayne Estuary (Baldoyle Estuary) was previously 'under review', but this has now been assigned a 'Moderate' water quality status.
- The status of Tolka Estuary was previously 'Moderate' but is now assigned a 'Poor' water quality status.
- The transitional water body into which the River Santry discharges (North Bull Island transitional water body) is now classified as 'Moderate'.

10.14.15. As stated above, Ireland's, 3<sup>rd</sup> River Basin Management Plan, Water Action Plan 2024, has been prepared and adopted which included updated Cycle 3 Catchment Report for HA 09 Liffey and Dublin Bay which relates to the site of the proposed project. In addition to the status reporting above, I note that Tolka\_040 and Mayne\_10 remain 'at risk' of not meeting good status under the Water Framework Directive, while the Mayne Estuary is at 'review'.

10.14.16. The Flood Risk Assessment was reviewed and there were no changes to the assessment undertaken by the Inspector ABO-301908. I have carried out an assessment of the revised FRA at section 9.12 of this Inspector's Addendum Report, I am satisfied that the proposed development is not subject to flood risk nor will it contribute to flood risk, subject to mitigation measures, i.e. SUDs.

10.14.17. **Potential Effects per EIAR Addendum**

10.14.18. Considering the updated proposed project elements there are no changes to the information presented in this Section of the EIAR in the 2018 planning application. The nature and scale of development remains as outlined in the 2018 planning application, and the methods to be used to construct and operate the proposed project also remain as proposed in the 2018 planning application.

10.14.19. **Mitigation**

10.14.20. There are no changes to the information presented in this Section of the EIAR in the 2018 planning application.

10.14.21. **Residual Effects**

10.14.22. There have been no new residual impacts, or residual impacts of a greater magnitude or greater adverse significance identified when compared to the EIAR in

the 2018 planning application. It remains the case that there are no significant residual impacts on hydrology and hydrogeology from the construction or operation of the GDD.

**10.14.23. Assessment**

10.14.24. The Outline CEMP states that the existing culverting arrangements across the River Mayne will be replaced with a new culvert which will be sized in accordance with the OPW's Section 50 consents so as not to cause an afflux (i.e. backing up of the river increasing the water level) thereby ensuring that there is no change to the existing flooding regime of the Mayne River. The culvert is increasing in size by 4m from that originally proposed in 2018. There is no discernible difference between the original submitted FRA in 2018 and the revised FRA submitted in 2023. I agree with the conclusion of the Inspector's report ABP-301908 that the proposed development would not result in increased flooding downstream of the site and would not give rise to adverse ecological consequences or effects on material assets including in the construction phase. As a consequence, I am satisfied that as there continues to be no flood risk, there is no requirement to notify or consult with the OPW.

10.14.25. The OPW is required to be consulted with respect to the section 50 consent which the applicant states will be required for the culvert in due course. This is a matter for the applicant and the OPW.

10.14.26. With respect to third party concerns regarding PFAS, I have considered this at section 10.13 above.

10.14.27. The applicant has clarified (in the response to the submissions) that there are no proposed overflows on the proposed orbital sewer route, and therefore, none are shown in the planning application drawings. The existing overflows on the network that will be diverted away from Ringsend WwTP and into the proposed WwTP and will be considered in the Waste Water Discharge Authorisation Licence application for the Proposed Project, which has been submitted separately to the EPA. I have addressed the issue of overflows at section 9.10 of this Addendum Report and I am satisfied that the proposed application assesses overflows in the EIAR and EIAR Addendum.

10.14.28. With respect to Iarnród Éireann's reference to the functionality of any existing historical drainage channel running parallel to the railway, the applicant has indicated its willingness to accept the suggested conditions put forward by Iarnród Éireann. I am satisfied that this matter can be appropriately captured in the CEMP. The relevant CEMP condition accounts for this, and I bring the Board's attention to the attached schedule of conditions in this regard.

10.14.29. Following consideration, there are no material changes to the assessment of hydrology and hydrogeology as a result of any of the updates discussed in Addendum Chapter 18A of the EIAR.

10.14.30. **Conclusion**

10.14.31. I am satisfied that the proposed development would not have an adverse impact on hydrology and hydrogeology, subject to compliance with relevant legislation and guidance, implementation of the EIAR mitigation measures, and compliance with recommended conditions.

10.15. **Marine Water Quality**

10.15.1. **Issues Raised**

10.15.2. A number of third-party submissions received in 2022 and 2024 raise issues relating to the Water Framework Directive Assessment and the combined approach assessment and matters relating, including, the methodology of the assessment undertaken by Uisce Éireann. Other concerns relate to out-of-date data and surveys, paucity of data in identifying statutory limits in relation to the combined approach, failure to accurately model the discharge for the project, WWDL overflows, risk to and deterioration of bathing water quality, lack of data re protection of shellfish waters and razor clam, failure to cumulatively assess discharges and emissions and Blanchardstown regional sewerage scheme, failure to fully comply with WFD requirements and lack of independent assessment by the EPA. Concerns are also raised with respect to Dublin airport PFAS contamination and associated cumulative impacts and the risks imposed on marine water quality and biodiversity. It is also stated that the proposed secondary treatment is inadequate.

10.15.3. **Context**

10.15.4. EIAR Chapter 8 describes the potential effects of the proposed development on freshwater aquatic biodiversity. The EIAR Addendum, Chapter 8A, reviews any material changes to the original EIAR chapter and provides additional surveys, data, literature sources or policy developments of relevance. The Addendum Chapter provides an assessment of the validity of earlier conclusions and any amendments to these.

10.15.5. The capacity of the proposed wastewater treatment plant will be 500,000 population equivalent, and the design remains unchanged since the original application in 2018. During the Oral Hearing process, it was agreed that ultraviolet light would be included to treat the final effluent prior to discharge to the marine waters providing for a reduction in the levels of E. coli and a greater level of protection to designated shellfish water.

10.15.6. The modelling for the operational phase of the proposed outfall pipeline route (marine section) has been updated to account for the continuous discharge of secondary treated effluent with the inclusion of Ultraviolet (UV) treatment of Escherichia Coliforms (COLI) and Intestinal Enterococci (IE) into the receiving waters for average flow conditions; and flow to full treatment (FFT) conditions. Updated data inputs to the modelling study were undertaken for riverine and Ringsend WwTP hydraulic flows and pollutant loads.

10.15.7. Having regard to third party concerns and the further information, the Board's in-house Environmental Scientist, Emmet Smyth was commissioned to review the relevant information with particular regard to the EIAR Addendum, Chapter 8A regarding Marine Water Quality and the Water Framework Directive Assessment (included as a separate report). His assessment, hereafter to as Specialist Report no.1, is appended to this Inspector's Addendum Report, as Appendix 3.

10.15.8. Consultations with the EPA are relevant in relation to the concurrent wastewater discharge licence application (ref. D0553-01) before the EPA, which will be doing its own assessment as part of the consideration of the licence application. This assessment will address the environmental impact arising from all wastewater discharges, including discharges from the primary discharge point and discharges from stormwater overflows and emergency overflows throughout the sewer network.

The EPA further states that the discharge will be controlled according to the combined approach and stricter limits can be applied where necessary to achieve the environmental objectives. The EPA r advises by correspondence dated 17<sup>th</sup> January 2025 that the licence application is currently under assessment and that the EIAR and EIAR addendum will be considered and assessed by the Agency as part of its assessment for the purpose of EIA.

10.15.9. The applicant's Response to Submissions report is also relevant insofar as it addresses third party concerns relating to marine water quality.

#### 10.15.10. **Potential Significant Effects**

10.15.11. The Board will note that section 8.4 of the EIAR sets out potential impacts of the GDD project in relation to marine water quality. Section 9.7.4.5 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to marine water quality and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.9 below. Potential significant additional effects arising from the additional information are considered in section 10.15.18 below.

<b>Table 10.9: Summary of potential significant effects on Marine Water Quality</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"> <li>The 'do nothing' scenario means that there will be no marine outfall and no impact. However, in the absence of development or alternative suitable treatment options environmental pressure is likely.</li> </ul>	
<b>Construction</b>	
<ul style="list-style-type: none"> <li>Impacts to marine water quality from suspended sediment from 6 months of seabed dredging during construction.</li> </ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"> <li>When considered on a region level and taking into account the provision of additional wastewater treatment capacity to relieve Ringsend the project can be associated with indirect positive impacts.</li> </ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"> <li>Decommissioning is not proposed.</li> </ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"> <li>There is potential for significant cumulative effect could give rise to cumulative effects on water quality and on the wider environment. Subject to adherence to measures set out in the CEMP and to the implementation of effective surface water management there would not be significant cumulative effects on water and / or on related ecology or environmental resources.</li> </ul>	

10.15.12.      **Changes to the Baseline**

10.15.13.      In 2022, three beaches in the study area were awarded a Blue Flag Award: Velvet Strand in Portmarnock; Balcarrick Beach in Donabate; and South Beach in Rush. In 2024, South Beach lost it's Blue Flag. When submitting the 2018 planning application only Velvet Strand was awarded a Blue Flag There are no changes to shellfish waters in the area: Malahide shellfish waters (ID: IE\_EA\_020\_0000) is located approximately 400m north of the proposed outfall pipeline route of the marine section and approximately 1km north-east of the proposed outfall pipeline route of the land-based section.

10.15.14.      The Surface Water Amendment Regulations came into effect in 2019, and the updated water quality standards for the general physico-chemical conditions supporting the biological elements in transitional and coastal waters are listed in Table 8.8.2, Chapter 8A.

10.15.15.      The recast Urban Wastewater Treatment Directive proposes to bring in changes to increase the standard of wastewater treatment required across the EU.

10.15.16.      Waste Water Discharge (Authorisation) Regulations 2007 have been updated by S.I. No. 214 of 2020 - European Union (Waste Water Discharge) Regulations and S.I. No. 480/2024 – Waste Water Discharge (Authorisation) (Amendment) Regulations 2024.

10.15.17.      Updated Water Framework Directive status classifications for relevant surface water bodies are provided in section 8.3.4 of Chapter 8A, see also section 10.14 above of this report.

10.15.18.      **Potential Effects per EIAR Addendum**

10.15.19.      There are no additional potential effects arising from construction phase as previously identified in the 2018 EIAR, which remains as dredging of the proposed outfall pipeline route (marine section) trench.

10.15.20.      During operation, the only impact on water quality will be due to the treated wastewater discharge. Subject to the embedded mitigation measures and those measures in the EIAR 2018 application, the EIAR Addendum states that the risk of a discharge of untreated sewage to the marine environment as a result of a partial or total failure of the proposed WwTP would not occur.



10.15.21. The updated cumulative impact assessment, Appendix A23.1 of the EIAR Addendum, indicates that should works occur simultaneously with the permitted Howth Harbour redevelopment project (ABP-314487) with the proposed GDD project that it could result in marine water quality impacts. This is considered further at section 10.22 where I have concluded that subject to scheduling agreements, no significant cumulative impacts on marine water quality would arise. A mitigation measure provides this scheduling agreement in the Addendum Outline CEMP.

10.15.22. **Mitigation**

10.15.23. There are no changes to the information presented in this Section of the EIAR in the 2018 planning application.

10.15.24. During construction, mitigation measures remain as:

- Release of sediment from dredging barges on flooding tide. Modelling shows discharge will deposit material mainly close to the dredging corridor. Subject to timing of release as proposed under mitigation measures presented the plume will flow in a northerly direction away from Irelands Eye.
- Turbidity and suspended sediment concentrations of the marine waters will be monitored during the course of the dredging operations.
- Suspended sediment concentrations will be monitored during the course of dredging. The dredging activity will be carried out in line with a prior approved consent.

10.15.25. As with the findings of the original EIAR and EIA, the updated modelling undertaken as part of this EIAR Addendum demonstrates that there are no significant impacts predicted on marine water quality during the operational phase. As a result, no mitigation measures are proposed. The operating plant would be monitored under the terms of an EPA licence.

10.15.26. **Residual Effects**

10.15.27. I consider that the residual impact on marine water quality would be Imperceptible to Slight impact on marine water quality as a result of the proposed development.

10.15.28. **Assessment**

10.15.29. I refer to the attached Specialist Report no. 1 which states at section 7.0:

“The updated modelling has categorically demonstrated that that under The European Union Environmental Objectives (Surface Waters) Amendment Regulations 2019 (S.I. 77 of 2019) the receiving waters will be able to attain ‘good status’ and meet the environmental quality objectives for nutrients in transitional and coastal waters. Based on the modelling carried out the applicant states that the proposed project will have an imperceptible residual impact on coastal water quality. Regarding the WFD, the modelling has predicted an imperceptible residual impact on coastal water quality and will not impede our ability to achieve our objectives under the WFD, namely achieving good status in all waterbodies. Having regard to the Bathing Water Regulations the updated modelling has shown imperceptible residual impact on the water quality of the coastal waters and further attested that the updated modelling has shown that the discharge from the proposed project will not influence any designated bathing water beaches nor Blue Flag beaches. Regarding shellfish waters, updated modelling has shown imperceptible residual impact on the water quality of the coastal waters and further attested that the updated modelling has shown that the discharge from the proposed project will not influence any of the designated shellfish waters.

The assessment of the circulation and tidal patterns in both flood tide and ebb tide in and around the discharge point further corroborates the predictions of the model with particular reference to the behaviour of the pollutant plume. Local maps of the tidal movements and circulatory patterns in and around the outfall point have been largely replicated in the modelling, with one discrepancy highlighted in the application that pertained to the local maps showing effluent plumes directed towards Portmarnock and Baldoyle and it is argued by the applicant that these maps were not cognisant of dispersion and dilution effects of the tidal movements. The water quality dispersion modelling would appear to corroborate the applicant’s contention in this regard.

The applicant, in their conclusion, states that the proposed project will have an imperceptible to slight impact on coastal water quality. I am satisfied that

the applicant has adequately shown that, with the level of treatment to be provided at the proposed development, the risk to the marine waters is imperceptible to slight. In addition, I am satisfied that the modelling carried out is representative of the conditions within the marine environment.

Based on the foregoing assessment of the discharge to coastal waters, it is concluded that the discharge from the proposed development whilst serving a 0.5 million p.e., will not cause a deterioration of the status, will not compromise the achievement of 'good' ecological status, or compromise the maintenance of 'good' chemical status. The proposed development, with nutrient removal and UV disinfection, is compatible with the achievement of bathing water quality standards and the revised modelling submitted supports this. The discharge to the marine waters will be managed, operated and controlled in accordance with a discharge licence to be issued by the EPA. Having regard to the above, I am satisfied that the applicant has demonstrated that the marine discharge will not have an adverse effect on the quality of the receiving waters."

10.15.30. Specialist Report No.2, by Marine Ecologist, Dr. Antony Knights, also validates the marine model and states:

"The spatial scale of the model and the modelling approach used is robust and comprehensive using state-of-art tools. The assessment team has used appropriate auxiliary equipment (i.e. Acoustic Doppler Current Profilers; ADCP) to validate the model, with ADCPs placed in appropriate areas to capture ocean dynamics. Results reveal the model is good at predicting the flow dynamics of the region, although does show some underestimation of current velocities in some cases. In this case, this would likely result in underestimates of dispersion; predictions of dispersion of material originating from the outfall are therefore also likely to be underestimated such that any predictions of concentrations are conservative (i.e. at their highest levels). In reality, one might expect greater dispersion/ dilution of effects over space and time."

10.15.31. Having regard to the totality of application documentation, including the Oral Hearing evidence (which includes the audio files, the written evidence submitted

during the course of the Oral Hearing and the Inspector's Report), updated modelling data, Response to Submissions Report and the attached Specialist Report No.1, I am satisfied that the proposed development, including the UV treatment process, would not have a significant impact on marine water quality. The marine water quality modelling for both construction and operation phases undertaken by the applicant has been found to be robust by the Environmental Scientist (see Specialist Report No. 1) and consultant Marine Ecologist. Dr. Knights. I concur with the EIAR and associated Addendum that the proposed development would have an Imperceptible to Slight impact on marine water quality. Furthermore, I am satisfied, based on the evidence before me, that third party concerns relating to the efficacy of the proposed UV treatment are not supported.

10.15.32. Regarding other third-party concerns relating to marine water quality, I consider that many of these issues were raised and addressed during the course of the Oral Hearing and subsequent Inspector's Report ABP-301908. With this mind, I consider the following substantive issues require consideration or clarification:

Impact on Bathing Waters and Shellfish Waters: The updated modelling examined the impacts on the designated bathing water beaches and included an assessment of environmental objectives for relevant areas under the Bathing Water Regulations and the Shellfish Water Regulations. All tidal plots have shown that there would be no compliance failures predicted at any of the designated bathing water beaches, Blue Flag beaches, nor shellfish waters arising from the proposed discharge from the Proposed Project.

I note the comments of the Environmental Scientist, Specialist Report No.1, who considers that the applicant has adequately demonstrated that the subject development will not impede on the utilisation of bathing waters during the bathing water season nor breach the mandatory value of 500cfu/100ml for E.coli for 'good' status or the mandatory value of 200cfu/100ml for Intestinal Enterococci for 'good' status. The discharge will be subject to licensing consent from the EPA and monitored in accordance with specific conditions pertaining to the marine outfall which will ensure the mitigation of the potential effects on the receiving water bodies are limited and controlled with the aim of achieving good surface water status by at the latest 2027. The Bathing Water Regulations ensure that monitoring of the Bathing Waters is carried out by the Local Authority during the bathing season. Notwithstanding this, the

Environmental Scientist considers, and with whom I agree, that the development as proposed will not cause a deterioration in the bathing waters having particular regard to *Escherichia coli* and Intestinal Enterococci.

With respect to Shellfish Waters, updated modelling has shown imperceptible residual impact on the water quality of the coastal waters and that the discharge from the proposed project will not influence any of the designated shellfish waters. The UV treatment system proposed at the WwTP will be designed and operated to achieve a maximum of 20,000 cfu/100ml (colony forming units per millilitre), with an average concentration in the order of 5,000 to 6,000 cfu/100ml, in the final effluent at the discharge point.

The bathing waters coastal and transitional waters 'excellent' quality threshold for enterococci is 100 cfu/100ml and *E. coli* is 250cfu/100ml and this is based on 95 percentile evaluation (of samples taken). The Shellfish Regulations set 300 faecal coliforms in shellfish flesh or intervalvular liquid. The bathing waters threshold represents the more stringent standards from a combined approach and microbiological perspective. As detailed above, all tidal plots have shown that there would be no compliance failures predicted at any of the designated bathing waters, nor shellfish waters arising from the proposed discharge from the proposed project.

Impact Point for Bathing Water Assessment: A third party submission states that the impact point assessed must ensure it is at the closest section of bathing water to the outfall discharge. The applicant, in reply, states that the location of the statutory monitoring point for Portmarnock Bathing Waters, against which all proposed project modelling results were reported, was not changed when the designated bathing water area was substantially extended in 2023. I am satisfied with this response.

Modelling of other discharges: Existing overflows on the network will be diverted away from Ringsend WwTP and into the proposed WwTP and will be considered by the EPA in the Waste Water Discharge Authorisation Licence application for the proposed project. The proposed project diverts existing flow and load from within the 9C and north fringe sewer catchments to a new wastewater treatment plant and does not introduce any new flow or load into the network. This is confirmed by the EPA in their letter in response to Regulation 44 (of the Waste Water Discharge (Authorisation) (Amendment) Regulations 2024) consultation received in May 2025

which states that stormwater overflows and emergency overflows from an agglomeration are part of the wastewater discharge and therefore form part of the assessment when considering the likely impacts on surface water bodies. The EPA will do its own assessment as part of the consideration of the license application and will address the environmental impact arising from all wastewater discharges including discharges from the primary discharge point and discharges from stormwater overflows and emergency overflows throughout the sewer network.

Validity of the model: I note the comments of the Environmental Scientist, Specialist Report No.1:

“The hydrodynamic modelling,..., assessed the following parameters in the marine environment, Dissolved Inorganic Nitrogen, Molybdate Reactive Phosphorus, Biochemical Oxygen Demand, E. coli and Intestinal Enterococci whilst having regard to meeting the required limits of the following statutory instruments; Waste Water Discharge (Authorisation) Regulations 2007 as amended, the Urban Wastewater Treatment Regulations 2001, as amended, the Water Framework Directive, the European Union Environmental Quality Objectives (Surface Waters) Regulations 2009, as amended, and the Bathing Water Regulations of 2008. They have done so utilising appropriate and robust modelling for the proposed discharge which provides an accurate representation of the hydrodynamics within the area.”

Process failure: the risk of process failure is previously addressed in Inspector's Report ABP-301908 at section 8.4.5, and nothing occurs in the further information which warrants a different conclusion from the Inspector's Report ABP-301908 who accepted the applicant's position that there would be no discharge to the marine environment in the event of a process failure.

Impact of PFAS contamination in the marine environment: This matter is discussed in section 11.13 of this report.

#### 10.15.33. **Conclusion**

10.15.34. I am satisfied, based on the information in the EIAR and having regard to the Specialist Report no. 1 attached to this report, that the proposed development will not result in a risk of deterioration of any water body, in this instance coastal waters, either on a temporary or permanent basis. Furthermore, I agree with the Inspector

ABP-301908 that the UV treatment will result in an improvement on the bacteriological quality of the treated wastewater discharged into the Irish Sea.

10.15.35. The extensive updated modelling undertaken as part of the EIAR Addendum has predicted that the proposed project will have an Imperceptible to Slight impact on the water quality off the coastal waters of Dublin.

10.15.36. Finally, I note that the treated wastewater emission levels will be dictated ultimately by EPA licence under the Waste Water Discharge (Authorisation) Regulations 2007, as amended.

## **Air & Climate**

### **10.16. Air**

#### **10.16.1. Issues Raised**

10.16.2. Several third-party submissions raise concerns with respect to air emissions and odour arising from the operation of the proposed WwTP and pumping station. Others raise concerns with respect to dust during construction. Odour impacts could have a significant effect on the quality of residents, and impact businesses. Concerns are raised with regard to odour impact on the patients of Connolly Hospital, the Children's Hospital (CHI at Connolly Hospital) and St. Francis Hospice. The EPA in their most recent submission (May 2025) advise that the WWD Regulations do not regulate odours or noise from WwTPs including associated infrastructure.

#### **10.16.3. Context**

10.16.4. EIAR Chapter 14 describes the potential effects of the proposed development on air. The EIAR Addendum, Chapter 14A, reviews any material changes to the original EIAR chapter and provides additional surveys, data, literature sources or policy developments of relevance. The Addendum Chapter provides an assessment of the validity of earlier conclusions and any amendments to these. Chapter 14A is supported by a Baseline Ambient Air Quality Report 2022, Appendix A14.2 and a copy of the Oral Hearing responses with respect to air quality and odour, Appendix A14.3.

#### 10.16.5. **Potential Significant Effects**

10.16.6. The Board will note that section 14.4 of the EIAR sets out potential impacts of the GDD project in relation to air quality and odour and section 9.7.5.1 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to air and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.10 below. Potential significant additional effects arising from the additional information are considered in section 10.16.9 below.

<b>Table 10.10: Summary of potential significant effects on Air</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"><li>There will be no significant change in air quality impacts if the proposed project does not proceed. Traffic is a dominant influence on air quality in many of the areas and if the proposed project does not proceed, this will continue to be the case.</li></ul>	
<b>Construction</b>	
<ul style="list-style-type: none"><li>During construction the likely significant impacts are related to Aspergillus, to dust and particulate matter and gases from traffic.</li></ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"><li>In the operation phase the GDD and Abbotstown pumping station and Dubber odour control unit have potential to give rise to odour effects and other air emissions.</li></ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"><li>Decommissioning is not proposed.</li></ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"><li>There is no potential for significant cumulative air impacts.</li></ul>	

#### 10.16.7. **Changes to the Baseline**

10.16.8. The meteorological conditions were reassessed and there were no significant changes observed. The ambient air quality data were reviewed and the three-year average for 2019 to 2021 is lower than expected due to the COVID-19 pandemic influences, but for most parameters there is no materially significant difference in the air quality data.

#### 10.16.9. **Potential Effects per EIAR Addendum**

10.16.10. With respect to construction stage impacts, there are no changes to the information presented in this Section of the EIAR in the 2018 planning application and potential significant impacts remain as per table 10.10 above.



10.16.11. With respect to the operational phase, there are no new emission sources associated with the UV system and the enclosure wherein the system will be located below or partially below ground level with an above-ground motor control centre will ensure that potential emissions are contained. The extension of the River Mayne culvert will not introduce new sources of emissions as the same construction techniques will be used. The introduction of UV treatment, similarly, will not introduce any new sources of construction phase emissions at the proposed WwTP site. The updated dispersion modelling predictions demonstrate there is no material difference from the 2018 findings. Emissions associated with the operation of the proposed WwTP will not cause a breach in any Air Quality Standard or guideline and there is no change in this assessment using the updated AERMOD model. Operational phase traffic emissions will remain as negligible.

10.16.12. **Mitigation**

10.16.13. The proposed mitigation measures in Chapter 14 (Air Quality, Odour and Climate) included in Volume 3 Part A of the EIAR in the 2018 planning application remain effective in the management of air quality and odour impacts associated with the proposed project, including the updated project elements.

10.16.14. **Residual Effects**

10.16.15. There is no change in the predicted residual impacts compared with those identified in this Section of the EIAR in the 2018 planning application.

10.16.16. **Assessment:**

10.16.17. There are no material changes to the assessment of air quality and odour as a result of any of the updates discussed in the relevant Addendum Chapter (Chapter 14) of the EIAR.

10.16.18. With respect to the EPA comments that the WWD Regulations do not regulate wastewater treatment plants other than the actual discharge, I am including an additional environmental condition with respect to odour control at the pumping station and WwTP as per the recommendation of the reporting Inspector ABP-301908. The EIAR assessed the proposed development against this criterion,

however, the schedule of measures did not specify the limit. The condition, per the Inspector's Report ABP-301908 is as follows:

- At Abbotstown Pumping Station and at Clonsaugh Wastewater Treatment Plant and Sludge Hub Centre, the adopted odour annoyance criterion of 1.5 OUE/m<sup>3</sup> as the 98th percentile of hourly averages shall not be exceeded at the boundaries of the sites.

#### 10.16.19. **Conclusion**

10.16.20. I conclude that there will be no significant residual impacts on air due to the comprehensive mitigation and management proposals for the elements of the GDD project and the additional mitigation measure regarding odour.

#### 10.17. **Climate**

##### 10.17.1. **Issues Raised**

10.17.2. The HSE (National Environmental Health Service) states that additional means to reduce emissions could be employed in construction and development phases. It recommends use of zero emission or low emission vehicles during construction. Also, shuttle bus and active travel measures for workers are recommended as well as renewable energy generation. It considered reference to climate adaptation is lacking, and that a response plan should be put in place across the entire Emergency Management Framework.

10.17.3. A third party raised a concern that marine hydrodynamic modelling was out of date regarding climate change and sea level rise.

##### 10.17.4. **Context**

10.17.5. EIAR Chapter 14 describes the potential effects of the proposed development on climate. The EIAR Addendum, Chapter 14A, reviews any material changes to the original EIAR chapter and provides additional surveys, data, literature sources or policy developments of relevance. The Addendum Chapter provide an assessment of the validity of earlier conclusions and any amendments to these. Chapter 14A is supported by a Climate Impact Assessment, Appendix A14.1. The proposed project

includes Anaerobic Digestion (AD), a Thermal Hydrolysis Process (THP) and a Combined Heat and Power (CHP) unit for the generation of renewable power through the recovery of heat and energy from the sludge treatment process and these processes remain as originally applied for in 2018.

#### 10.17.6. **Potential Significant Effects**

10.17.7. The Board will note that section 14.5 and 14.6 of the EIAR sets out potential impacts of the GDD project in relation to marine water quality and section 9.7.5.3 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to climate and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.11 below. Potential significant additional effects arising from the additional information are considered in section 10.17.12 below.

<b>Table 10.11: Summary of potential significant effects on Climate</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"> <li>If the proposed project does not proceed then the emissions of GHGs in the area are projected to remain the same with some relatively minor increases as activity in the area develops. However, GHG emissions will still occur somewhere because the wastewater treatment infrastructure must be provided to cater for existing and future needs.</li> </ul>	
<b>Construction</b>	
<ul style="list-style-type: none"> <li>The principal GHG emissions associated with construction are CO<sub>2</sub> from transport and machinery utilised in construction.</li> </ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"> <li>There would be predicted direct increases in CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O as well as indirect emissions of CO<sub>2</sub> resulting from energy generation to run the plant as described in section 14.6.5 of the EIAR.</li> <li>The N<sub>2</sub>O emitted is generated by nitrification and denitrification processes used to remove nitrogenous compounds from wastewater, and most of the CO<sub>2</sub> and CH<sub>4</sub>, is generated as a result of the sludge processes with some dissolved CH<sub>4</sub> potentially present in the wastewater throughout the treatment stages. The most significant contributions to GHG emissions are CH<sub>4</sub> and CO<sub>2</sub>.</li> </ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"> <li>Decommissioning is not proposed.</li> </ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"> <li>None identified.</li> </ul>	

#### 10.17.8. **Changes to the Baseline**

- 10.17.9. A full climate impact assessment (CIA) of the impact of greenhouse gas (GHG) emissions from the proposed project on climate during both the Construction and the Operational Phases has been completed and is reported in full in Appendix A14.1 in Volume 3A Part B of the EIAR Addendum. Such detailed assessment was not included in the original EIAR. A model-based scenario quantification approach was adopted to assess the impact of emissions from within the system boundary. A purpose-built model was created to calculate the anticipated GHG emissions from both the construction (including embodied carbon) and operational phases of the proposed project to calculate a carbon footprint for the proposed project.
- 10.17.10. Relevant changes to guidelines, policy and legislation are listed in section 2.2 of the Climate Impact Assessment (CIA). CAP25 and CAP24 are also relevant. The accompanying Annex of Actions (CAP25) contains a number of themes, which include built environment and industry with actions to reduce carbon in construction materials for all new building and to reduce industry fossil fuel demand through energy efficient measures. It is an action to improve the resilience of Ireland's water infrastructure through implementation of a Nature Based Solutions (NBS) Programme. With respect to climate adaptation, it is an action to develop adaptation plans for water quality and water services infrastructure.
- 10.17.11. The CIA states that for 2022, the total national emissions were 60.76 Mt CO<sub>2</sub>e (excluding land use, land use change and forestry). This represents a 1.9% decrease compared to 2021 figures. The sector with the highest emissions is agriculture at 38.4% of the total, followed by transport at 19.1%. GHG emissions from the 'Waste' sector increased by 4.9% in 2021. The 2022 EPA GHG Inventory reported, under IPCC Level 3 emission source category '5.D Emissions from Wastewater Treatment and Discharge' amounted to 160.2kt CO<sub>2</sub>e in 2020.
- 10.17.12. **Potential Effects per EIAR Addendum**
- 10.17.13. Proposed construction stage and operation stage impacts are considered in section 4.0 of the CIA.
- 10.17.14. The proposed project is estimated to result in total construction phase CO<sub>2</sub>e emissions of 23.1kt embodied carbon over an estimated 48-month period, equivalent to an annualised total of 5.8kt CO<sub>2</sub>e representing ca.84% embodied carbon in

construction materials and ca. 15% from construction activities and related transportation. The percentage contribution of the annualised carbon emissions from the proposed project is estimated to be 0.12% of Ireland's 2030 'Industry' sector carbon budget. The potential impact to climate of the construction phase of the proposed project, prior to mitigation, will be Moderate Adverse, Significant and Short-Term.

10.17.15. During the operational phase, as calculated, the proposed project, in the absence of embedded design measures will result in emissions of 747.90kt CO<sub>2</sub>e over its 50-year design life, which is equivalent to an annualised total of 0.05% of Ireland's non-ETS (Emissions Trading System) 2030 target, based on annualised emissions of 15.0kt CO<sub>2</sub>e. The assessment indicates that GHG emissions from both process and fugitive emissions (CH<sub>4</sub> and N<sub>2</sub>O) account for over 94% of emissions in the absence of embedded design measures. Where the proposed project is operational in the absence of embedded design measures, the impact would be Moderate to Major Adverse, Significant and Long-Term. The embedded design measures are stated to be the provision of advanced sludge treatment and heat and energy recovery. With embedded design measures, the proposed project will result in total operational phase GHG emissions of 677.3kt CO<sub>2</sub>e over a 50- year period, equivalent to an annualised total of 13.5kt CO<sub>2</sub>e, or 0.04% of Ireland's non-ETS 2030 target or 0.022% of the national GHG emissions (in 2022).

10.17.16. In the absence of the proposed project, do-nothing scenario, the climate impact is considered to be major adverse, significant and long-term.

10.17.17. **Mitigation**

10.17.18. Together with the mitigation measures detailed in the 2018 EIAR and the embedded design mitigation measures, i.e. the provision of advanced and sustainable sludge treatment (through the implementation of the SHC), and heat and energy recovery, additional mitigation measures to mitigate the impact of GHG emissions are set out in Appendix A14.1. These are:

During construction:

- A whole-life Carbon Management Plan will be implemented.

- Lifecycle assessments for major asset components will be undertaken and recommendations will be implemented to influence the procurement of low carbon / sustainable / locally sourced materials and equipment, where possible; and
- Materials procured for major asset components will have verified Environmental Product Declarations (EPDs).
- The appointed contractor(s) will comply with the latest EU regulations relating to CO2 emission performance standards for new passenger cars and new light commercial vehicles for Construction Phase activities.

#### During Operation

- A whole-life Carbon Management Plan will be implemented.
- Net zero for operational emissions in relation to both process and energy related emissions will be supported.
- Optimisation of both design and operational processes which will facilitate a low sludge retention time, minimising the risk of nitrification with the development of an Operational Commissioning Plan.
- Fugitive emissions will be minimised via design technologies.
- Scheduled capital replacement and regular planned maintenance.

#### 10.17.19. **Residual Effects**

10.17.20. Residual effects are set out in Appendix A14.1. The GHG emissions associated with the construction phase of the proposed project will be Minor Adverse, Not Significant and Short-Term. The GHG emissions in kt CO2e associated with the operational phase of the proposed project, following the implementation of mitigation measures, will be Moderate Adverse, Significant and Long-Term.

#### 10.17.21. **Assessment:**

10.17.22. The proposed project is estimated to result in total construction phase GHG emissions of 23.1kt CO2e over a 48 month construction and commissioning period, equivalent to an annualised total of 0.0014% of Ireland's non-ETS 2030 emissions target and 0.12% of Ireland's carbon sectoral ('Industry') budget for 2030

- 10.17.23. The proposed project is estimated to result in total operational phase GHG emissions of 677.3kt CO<sub>2</sub>e over a 50 year operational period, equivalent to an annualised total of 0.04% of Ireland's non-ETS 2030 emissions target and 2.25% of Ireland's carbon sectoral ('Waste') budget for 2030.
- 10.17.24. The mitigation measures proposed will have the effect of reducing carbon emissions during the construction and operational phases. The original EIAR and the reporting Inspector of ABP-301908 considered that there were no significant predicted impacts on climate in relation to the GDD (see page 212 of the IR). In light of the EIAR Addendum, I accept the conclusion that the operational phase of the proposed development results in a moderate adverse, significant and long-term impact. The potential impact assessment reflects the GHG emissions which shall arise as a result of the significant population growth. Emissions generated as a consequence of wastewater and sludge treatment have high emission factors and alternatives to treat wastewater volumes at similar scales are not currently available.
- 10.17.25. I accept that the co-benefits of the proposed project extend beyond the impact of the emissions through the provision of infrastructure which is designed to meet both current and future wastewater demands, with capacity to recover energy and produce a circular biosolid fertiliser product. I also note and accept that in the absence of the proposed project, the do-nothing scenario, the climate impact is also considered to be major adverse, significant and long-term. I further accept the Inspector's ABP-301908 opinion that any climate impacts which would result from the projects would occur elsewhere if this project did not proceed at this location – because population will continue to grow and associated effluent generated will produce GHG emissions if not at Clonsaugh at alternative location(s).
- 10.17.26. I note that any requirements resulting from the (Recast) Urban Wastewater Treatment Directive will in time introduce new obligations that align urban wastewater treatment with EU climate and energy goals and with which Ireland will be required to implement/align with. I note the applicant states that an opportunity exists at detailed design stage to provide operational and process flexibility to support a carbonaceous only WwTP in accordance with regulatory requirements. If the plant can be designed in a way that supports carbonaceous treatment only (with low sludge retention times which minimise the risk of nitrification), this would result in

a process capable of producing lower emissions. I accept that scope exists for further reduction in emissions at design stage.

10.17.27. I have considered compliance with Section 15 of the Climate Action and Low Carbon Development Act 2015 at section 9.13 of this Inspector's Addendum Report and conclude that a decision by the Board would be consistent with its duties under the Climate Act, as far as practicable given GHG emissions generation, by ensuring it is recovering energy and contributing to a circular economy, and which in time will be required to comply with new climate and energy obligations as a result of the Recast Urban Wastewater Treatment Directive.

10.17.28. With respect to HSE submissions relating to climate, the applicant provides a comprehensive response at section 3.2.11 of the Response to Submissions report, wherein the HSE are referred to the mitigation measures included in the Climate Impact Assessment and the Traffic Management Plan to address transport emissions concerns wherein appointed contractors will be required to comply with the latest EU regulations relating to Co2 emission performance standards for new passenger cars and light commercial vehicles for construction phase activities. With respect to energy recovery, reference is made to the sludge treatment process and biogas which will part fuel the operation of the WwTP. I accept there is scope for additional renewable energy technologies, such as solar energy, which may be realised in the future but in my opinion is not an impediment to permission. With respect to climate resilience, a new risk category was added to the updated risk assessment and evaluates the risk of climate change-related weather events on the proposed project. This is considered in section 10.21 of this report.

10.17.29. Regarding the third-party concern with respect to hydrodynamic modelling and climate change, the proposed project will serve the projected wastewater treatment requirements of existing and future drainage catchments in the north and north-west of the Dublin agglomeration, up to the proposed project's 2050 design horizon. The modelling has regard to future loads in this regard. I have concluded that the marine water quality impact arising from the proposed development is not significant during the operational phase – which is out to 2050. I am satisfied that there is no substance to the concerns regarding hydrodynamic modelling and climate change.



#### 10.17.30. **Conclusion**

10.17.31. I accept the conclusion the GHG emissions associated with the construction phase of the proposed project will be minor adverse, not significant and short-term that the operational phase of the proposed development results in a moderate adverse, significant and long-term impact on climate.

### **Material Assets, Cultural Heritage and the Landscape**

#### 10.18. **Material Assets**

- **Issues Raised**
- Third parties raise concerns about traffic impact and exacerbation of existing traffic problems, unsuitable roads and impact on quality of life. Third parties also consider that the traffic impacts have not been properly assessed, referring to junction changes and seasonal adjustments of traffic. Concerns are raised with respect to impact on medical institutions. A third-party submission states that there are issues that need to be addressed for the crossing of the railway line at Maynetown. Impact on residential amenity, residential properties and devaluation concerns are also raised.
- Iarnród Éireann request engagement; that there is no increase in risk to the railway, ensure safety of operations, and request that embankment, supporting culvert and overbridge integrity along the Dublin-Belfast railway line are maintained and recommend conditions to be adhered to. Their submission is supported by a submission from the Commission for Railway Regulation.
- TII raised a number of conditions and requirements for the applicant to comply with in undertaking the proposed project in the vicinity of TII assets.
- Dublin Airport Authority (DAA) consider that the development has significant potential to impact on the external road network; wayleaves could inhibit future development of airport lands particularly to the east of the R132, the Board should have regard to Objective EI03 of the Dublin Airport LAP and request a condition to agree construction traffic plans with DAA.

10.18.1. NTA in its submission note that the GDD project would cross the Bus Connects Swords to City Centre Core Bus Corridor Scheme. It also requests that the Engineering Specialist Report for Crossings and the description of the proposed project should be updated to reference the Metrolink project. There is potential, if consent is approved for these projects that the construction phases of these projects and the GDDP to overlap and the NTA request that applicant is conditioned to engage with the NTA and Project Teams.

- **Context**

- EIAR Chapter 21 describes the potential effects of the proposed development on material assets. Chapter 20 deals with waste and Chapter 13 deals with traffic and transport. The EIAR Addendum Chapters, 21A, 20A and 13A, review any material changes to the original EIAR chapters and provides additional surveys (traffic surveys were redone), data, literature sources or policy developments of relevance. The Addendum Chapters provide an assessment of the validity of earlier conclusions and any amendments to these. Chapter 13A is supported by Traffic Calculations, Count Data, Junction 10 Outputs and a copy of the Oral Hearing response to the traffic and transport questions, Appendices A13.1 – A13.5 refers.
- The north-south access road to the WwTP/SHC site is proposed to cross the River Mayne which would be culverted and the proposed extended culvert forms part of the further information submitted by the applicant. This crossing will facilitate future road provision including the north south link which will connect to the future East West Distributor Road as identified in the Final Development Plan (FDP) 2023-2029.

- **Potential Significant Effects**

10.18.2. The Board will note that section 21.25, 20.4, 20.5, 13.6 and 13.7 of the EIAR sets out potential impacts of the GDD project in relation to material assets, waste and traffic and transport, respectively. The Board will also note that section 9.7.6.2 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to material assets and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-

301908 and are summarised in Table 10.12 below. Potential significant additional effects arising from the additional information are considered in section 10.18.10 below.

<b>Table 10.12: Summary of potential significant effects on Material Assets, including waste, traffic and transport.</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"> <li>Should the construction of the proposed project not occur, there will be no impact on any of the major utilities, natural features, raw materials or transport and traffic impacts arising, however some junctions will experience further capacity issues. No waste produced or arises and no impact arising.</li> </ul>	
<b>Construction</b>	
<ul style="list-style-type: none"> <li>Nearby medical facilities and their operation could be significantly impacted in the construction period.</li> <li>Access to lands known as 'Gannon lands' could be impacted (without the widened culvert at the River Mayne crossing).</li> <li>The raw materials which would be impacted include approximately 84,200 m<sup>3</sup> of material, to be sourced from quarries and various pipes for the sewer route as well as concrete and steel installation, building materials and mechanical and electrical equipment.</li> <li>Other impacts considered are detailed and indicated to be mitigated by design and/or avoidance.</li> </ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"> <li>Operational traffic will result in increased congestion at junctions which are already congested and which will be congested at the time of operation of the wastewater treatment plant. This will add to delays at those locations.</li> <li>Other impacts considered are detailed and indicated to be mitigated by design and/or avoidance.</li> </ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"> <li>Decommissioning is not proposed.</li> </ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"> <li>There is potential to impact the road network in terms of potential cumulative impacts, which include Dublin airport runway, development at NSC and Connolly Hospital, bus rapid transit projects if permitted, the possible Metro lines, Ringsend WwTP upgrade project and the future Malahide Road realignment scheme. In general, minimal potential cumulative impacts on traffic are anticipated as a result of these projects. In considering the potential traffic assessments the approach has been to take into account likely future traffic as a result of zoned lands and to consider what may be a likely worst case scenario. In this respect it may reasonably be concluded that the cumulative impacts are fully addressed.</li> </ul>	

## ■ **Changes to the Baseline**

10.18.3. The applicant undertook a desk-based review to assess any changes to the baseline environment with regards to current existing major utilities and natural features, since the planning application was lodged in 2018. Major utility routing constraints identified updated details in respect of Metrolink (application lodged), aviation fuel transmission pipeline (under construction) and the Baldoyle to

Portmarnock Greenway (completed). Other relevant and recent applications that potentially interact with the proposed orbital route/outfall route are considered in sections 7 and 10.22 of this report, of note are:

- ABP 319282-24: proposed waste facility at Huntstown and Coldwinters.
- ABP 318677-23: permitted 110kV underground cable and substation at Fieldstown td.
- ABP 317831-23: proposed 110 kV electricity circuits, close to the proposed WWTP and intersecting the proposed orbital and outfall routes. Not yet decided.
- F24A/0974E: permission granted for undergrounding a section of the Grange-Collinstown 38kV overhead line at Stockhole Lane, Clonsaugh.
- ABP 317121-23: permitted Bus Connects Swords to City Centre bus corridor scheme.
- ABP 320815-23 / FCC F23A/0636: proposed upgrades to drainage infrastructure and construction of additional drainage infrastructure at Dublin Airport.
- ABP 319422-24: permitted, 400 kV underground cable.
- ABP 319866-24: proposed offshore windfarm (North Irish Sea Array), associated services – transects proposed outfall route.
- ABP-320164-24: DART railway order.
- ABP 314663-22/ F21A/0389: permitted Portmarnock wastewater pumping station and related works.

I am satisfied that these applications have had regard to the proposed GDD project in the course of their respective applications.

10.18.4. With respect to waste, the EIAR Addendum notes that there will be only minor changes to the waste volumes arising as a result of the proposed project, when compared to the 2018 planning application. Updated details with respect to waste licensed facilities are provided. In terms of waste policy, the National Waste Plan for a Circular Economy, A Waste Action Plan for a Circular Economy – Ireland's

National Waste Policy 2020 – 2025, Whole of Government Circular Economy Strategy 2022 – 2023 and the National Water Resources Plan have been published, as has the FDP 2023-2029 which includes policies relating to waste management, waste reduction and a circular economy.

10.18.5. With respect to traffic and transport, background traffic flows for the assessment years were determined having regard to the TII's updated Project Appraisal Guidelines (2021). The EIAR Addendum has regard to updated policies in the Fingal DP 2023-2028 and the Greater Dublin Area Strategy 2022-2042. The construction programme has been updated. The total construction phase will remain as approximately 48 months, including 12 months of commissioning. The overall peak traffic will occur in Phase 5 for the proposed project. Following a review of projects in the area since the 2018 EIAR, the EIAR Addendum states that minimal potential cumulative impacts on traffic capacity are anticipated because of these projects.

▪ **Potential Effects per EIAR Addendum**

10.18.6. There are no changes to potential effects relating to material assets.

10.18.7. There will be a marginal increase in the volume of material excavated for the inclusion of the UV treatment unit and the 4m extension to the River Mayne Culvert. The additional excavated material will amount to an increase of approximately 290m<sup>3</sup> (metres cubed) above the estimated 270,950m<sup>3</sup> reported in the 2018 planning application. This material will be included in the proposed landscaping berm surrounding the proposed WwTP (subject to appropriate testing to confirm its suitability). The UV lamps will create a small but additional source of waste. There are no changes to predicted impacts relating to waste considered in the original EIAR.

10.18.8. With respect to traffic and transport, all junctions assessed in the 2018 EIAR were reassessed. During the construction phase:

- Junction 1: Clonsaugh Road and the Clayton Hotel Access Roundabout, will remain as operating with marginally higher queues and delays in peak hours in 2027, during the final phase of construction. The impact remains as negative and slight.

- Junction 2: R139 Road – Clonshaugh Road Roundabout, continues to be over capacity. The impact remains as negative and slight.
- Proposed Junction A: Clonshaugh Road – Proposed WwTP Priority Junction, there are no expected delays on Clonshaugh Road as vehicles exiting the proposed WwTP will wait for gaps in the traffic, with the significance remaining as negative and not significant.
- Proposed Junction B: R139 Road – Proposed WwTP Priority Junction, vehicles will only be allowed to turn left into the proposed WwTP from the R139 Road. This means that no delays to traffic at this location are expected, with the significance remaining as neutral and imperceptible.
- Junction 5: signalised crossroads between the R139 Road and the R107 Malahide Road, is currently over capacity, with the significance remaining as negative and not significant.
- Junction 8: R123 Moyne Road – R106 Coast Road Priority Junction, Arm B is over capacity in 2022 and will be over capacity in 2027, with the overall significance remaining as negative and slight.
- Junction 9: R106 Coast Road – Golf Links Road Priority Junction, will continue to operate well within capacity with the significance remaining as negative and not significant.
- Junction 10: R106 Coast Road – Station Road Mini-Roundabout Junction, as previously determined Junction 10 is currently over capacity on all arms of the junction. The significance remains as neutral and imperceptible.
- Junction 11: R843 (Snugborough Road) – National Aquatic Centre Signalised Priority Junction, there will be a potential temporary maximum increase in the PM peak on Arm B, with the significance remaining as negative and slight.
- Junction 12: R843 Snugborough Road – Existing Gateway Priority Junction, will remain operating well within capacity, with the significance remaining as neutral and imperceptible.

10.18.9. For the operational phase, proposed junctions at the proposed WwTP, have been reanalysed:

- Junction 1: Clonsaugh Road – Hotel Access Roundabout will continue to operate within capacity, with the significance remaining as negative and not significant.
- Junction 2: R139 Road – Clonsaugh Road Roundabout: continues to be currently over capacity R139 Road east and west as it was in 2018, with the significance remaining as negative and not significant.
- Proposed Junction A (Exit Only): Clonsaugh Road – Proposed WwTP Priority Junction, will operate with negligible queues and delays during the peak hours in 2044 with the significance remaining as Neutral and Imperceptible.
- Proposed Junction B (Entry Only): R139 Road – Proposed WwTP Priority Junction, will operate without any queues or delays during the peak hours in 2044 with the significance remaining as negative and imperceptible.

▪ **Mitigation**

10.18.10. The proposed mitigation measures in EIAR Chapter 21 (Material Assets), Chapter 20 (Waste) and Chapter 13 (Traffic and Transport) included in Volume 3 Part A of the EIAR in the 2018 planning application remain effective in the management of impacts on material assets and traffic, transport and waste impacts associated with the proposed project, including the updated project elements.

▪ **Residual Effects**

10.18.11. There is no change in the predicted residual impacts compared with those identified in this Section of the EIAR in the 2018 planning application.

▪ **Assessment**

10.18.12. With respect to Junction 10 on the R106 Coast Road – Station Road, this junction has been upgraded to a signalised junction. Similarly, Junction 8 R123 Moyne Road – R106 Coast Road Priority Junction has been upgraded to a signalised junction. At the time the planning application was lodged (in 2018), these

were mini roundabouts which was reassessed as a worst-case scenario for the 2023 EIAR Addendum. In the response to submissions, the applicant states that a signalised junction has more capacity than a mini-roundabout, and therefore, it is expected that the junction upgrade to a signalised junction has increased the capacity of the junctions. The applicant also notes that Lidl (at junction 9) was operating at the November 2022 traffic counts which informed the EIAR Addendum and so is taken into consideration in the baseline. I am satisfied with the response provided by the applicant and accept that impact on these junctions during the construction phase will be no worse than that already determined and will not be significant.

10.18.13. With respect to seasonal variation of traffic count data, this was considered in the EIAR and was not considered to be necessary as the traffic volumes for both the AM and PM peak flows were above the average peak traffic flows.

10.18.14. Regarding observation from TII, the applicant has indicated that it accepts the intent of suggested conditions; intends to comply with conditions and will continue to engage with TII. Regarding the observation from NTA, the applicant states that it has liaised with the NTA in relation to the Swords to City Centre Bus Connects Scheme during the design development and has liaised with the TII in respect of the Metrolink Project and is committed to continued engagement with the NTA and TII. With respect to CRR & Iarnród Éireann concerns, the applicant has stated that it will consult with Iarnród Éireann and CRR and any requirements from Iarnród Éireann will be included in the contract documents. I am satisfied that the EIAR mitigation measures are adequate to address the TII, NTA and CRR observations.

10.18.15. In addition to upgraded junctions and seasonal variations in traffic which are addressed above, other issues which arose related to traffic impact and exacerbation of existing traffic problems, unsuitable roads and impact on quality of life, impact on medical institutions, residential amenity and residential properties and devaluation concerns. I am satisfied that as no additional or new impacts arise in respect of the further information submitted by the applicant and that these matters are satisfactorily addressed in the Inspector's Report ABP-301908. Furthermore, the updated Traffic Impact Assessment does not indicate any significant change from that undertaken for the application in 2018. I am satisfied therefore that the GDD



project development is acceptable in terms of construction and operation phase traffic impacts.

10.18.16. Having regard to the submissions from Iarnród Éireann and CRR, I recommend that a construction method statement shall be agreed in writing with Iarnród Éireann with respect to rail infrastructure and which shall be agreed in writing with Fingal County Council. I have provided for this in the schedule of conditions.

10.18.17. There are no material changes to the assessment of material assets, including waste, traffic and transport as a result of any of the updates discussed in the relevant Addendum Chapters of the EIAR.

▪ **Conclusion**

- I conclude that there will be no significant impacts on Material Assets due to the comprehensive mitigation and management proposals for the elements of the GDD project.

10.19. **Cultural Heritage**

10.19.1. **Issues Raised**

10.19.2. A third-party submission draws attention to a new monument in the path of the proposed pipeline corridor at Maynetown by compound 9 and a new shipwreck on the path of the orbital sewer (marine section).

10.19.3. The Meath County Council submission includes an in-house archaeology heritage desk-based review and assessment of the proposed development. A suggested wording of an archaeological condition is included and it is stated that it would be useful if the quantity of advance trial trench testing in greenfield areas were specified, recommending 12% in all greenfield areas. Reference to made to the absence of original cultural heritage impact report in preparation of the submission/report.

10.19.4. **Context**

10.19.5. EIAR Chapter 16 describes the potential effects of the proposed development on archaeology, architectural and cultural heritage. The EIAR Addendum, Chapter

16A, reviews any material changes to the original EIAR chapter and provides additional surveys, data, literature sources or policy developments of relevance. The Addendum Chapter provide an assessment of the validity of earlier conclusions and any amendments to these. Chapter 16A is supported by Figures 16.1-16.6 showing surrounding sites of cultural heritage significance.

#### 10.19.6. **Potential Significant Effects**

10.19.7. The Board will note that section 16.5 of the EIAR sets out potential impacts of the GDD project in relation to cultural heritage and section 9.7.6.4 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to cultural heritage and identifies the potential significant effects of the proposed development in this respect . For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.13 below. Potential significant additional effects arising from the additional information are considered in section 10.19.15 below.

<b>Table 10.13: Summary of potential significant effects on Cultural Hertiage</b>
<b>Do Nothing</b>
<ul style="list-style-type: none"> <li>The 'do nothing' scenario will result in no impact, direct or indirectly on archaeological, architectural and cultural heritage.</li> </ul>
<b>Construction</b>
<ul style="list-style-type: none"> <li>Direct impacts on recorded monuments. In all 10 sites are directly impacted. This is a Very Significant Impact in the case of 3 no. individual archaeological monuments.</li> <li>Direct impacts on areas of archaeological potential. In some cases the impact is Very Significant.</li> <li>Potential impacts on marine archaeology specifically shipwrecks cannot be ruled out although none are identified within the corridor of the outfall pipeline.</li> </ul>
<b>Operational Impacts</b>
<ul style="list-style-type: none"> <li>No impacts are predicted.</li> </ul>
<b>Decommissioning</b>
<ul style="list-style-type: none"> <li>Decommissioning is not proposed.</li> </ul>
<b>Cumulative Impacts</b>
<ul style="list-style-type: none"> <li>None identified.</li> </ul>

#### 10.19.8. **Changes to the Baseline**

10.19.9. A desk-based review was undertaken in August 2023 to assess any changes to the baseline environment with regards to archaeological, architectural and cultural heritage since the application was lodged in 2018.

- 10.19.10. One additional Protected Structure is now located within the study area of the proposed project (BtH 29), but no other changes are detailed in the new Fingal and Dublin City development plans that materially affect the results of the assessment carried out as part of the 2018 planning application.
- 10.19.11. With regards to the Bronze Age period, a number of additional ring ditches have been identified in the study area of the proposed project since the compilation of the 2018 planning application. A correction was made to AH 53 which was incorrectly referenced in the 2018 application.
- 10.19.12. There are now four recorded ringforts (previously three) located within the study area of the proposed project, (AH 8, 19, 23, 75), with AH 75 being the most recent addition.
- 10.19.13. A total of 29 additional recorded sites have been identified within the study area of the proposed project since the assessment for the 2018 planning application was undertaken. Of these, none are classed as National Monuments or further protected with a preservation order (PO). Four of the sites (AH 43, AH 44, AH 45 and AH 47) identified in this Section of the EIAR in the 2018 planning application have been updated to reflect their current status or distance from the proposed project. AH 47 and AH 43 were subject to archaeological excavation. AH 44 has been preserved in situ as part of a housing development.
- 10.19.14. Three additional recorded shipwrecks within the study area of the proposed project have been added to the Shipwreck Inventory since the assessment for the 2018 planning application was undertaken.
- 10.19.15. **Potential Effects per EIAR Addendum**
- 10.19.16. No additional significant impacts are predicted upon the recorded monuments as a result of the construction of the proposed project.
- 10.19.17. The proposed outfall will not impact shipwrecks as the proposed outfall route (marine section) will be tunnelled at these locations. It remains possible that archaeological deposits or features associated with shipwrecks remain buried at deeper levels beneath the current seabed. Dredging associated with the laying of the proposed outfall pipeline route (marine section) has the potential, directly and negatively, to impact these potential remains to a significant or profound degree.

10.19.18. No impacts are predicted in respect of the additional protected structure. The structure is located adjacent to the proposed access road to the proposed Abbotstown pumping station in the townland of Sheephill (BtH 29). However, the proposed access road is an existing access road, and as such, no impacts are predicted upon this structure as a result of the construction of the proposed project.

10.19.19. No significant impacts arise in respect of the updated recorded archaeological heritage sites identified in the preparation of the EIAR Addendum, the nearest of which is c. 180m from the proposed WwTP.

10.19.20. **Mitigation**

10.19.21. The proposed mitigation measures in EIAR Chapter 16 included in Volume 3 Part A of the EIAR in the 2018 planning application remain effective in the management of impacts on archaeological, architectural and cultural heritage impacts associated with the proposed project, including the updated project elements.

10.19.22. **Residual Effects**

10.19.23. There is no change in the predicted residual impacts compared with those identified in this Section of the EIAR in the 2018 planning application.

10.19.24. **Assessment:**

10.19.25. With respect the new monument at Maynetown (raised by a third party), this is listed as AH 80 in the updated assessment (RMP Ref. DU015-152) and the potential for impacts to this site were considered in Volume 3A Part A of the 2023 EIAR Addendum.

10.19.26. With respect to Meath County Council's submission, the applicant advises in the response to submissions that Chapter 16 in the 2018 EIAR includes mitigation that includes an extensive programme of archaeological testing (12%) in all greenfield areas in advance of groundworks. The applicant further advises on conclusions of impact. I am satisfied that third party concerns have been satisfactorily addressed.

10.19.27. Overall, the impact assessment and mitigation measures detailed in Chapter 16 (Archaeological, Architectural and Cultural Heritage) in Volume 3 Part A of the EIAR in the 2018 planning application remain unchanged, with the exception that there will no longer be any direct negative impacts on a recorded ring ditch site (AH 44).

10.19.28. **Conclusion**

I conclude that there will be no significant impacts on archaeological, architectural or cultural heritage due to the comprehensive mitigation and management proposals for the elements of the GDD project.

10.20. **Landscape & Visual**

10.20.1. **Issues Raised**

10.20.2. Third parties raise concerns regarding the visual impact of the proposed WwTP.

10.20.3. **Context**

10.20.4. EIAR Chapter 12 describes the potential effects of the proposed development on landscape and visual. The EIAR Addendum Chapter 12A reviews any material changes to the original EIAR chapters and provides updated photomontages (Volume 6A of the EIAR Addendum), data, literature sources or policy developments of relevance. The Addendum Chapter provides an assessment of the validity of earlier conclusions and any amendments to these. Chapter 12A is supported by updated landscape mitigation plans for the WwTP site (Figure 12.1) and the Abbotstown Pumping Station (Figure 12.2).

10.20.5. **Potential Significant Effects**

10.20.6. The Board will note that section 12.4 and 12.5 of the EIAR sets out potential impacts of the GDD project in relation to landscape and visual impact and section 9.7.6.6 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to landscape and visual and identifies the potential significant effects of the proposed development in this respect . For the purposes of clarity, and

to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.14 below. Potential significant additional effects arising from the additional information are considered in section 10.20.13 below.

<b>Table 10.14: Summary of potential significant effects on Landscape</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"> <li>The proposed WwTP site is likely to remain as farmland in the short-term. However, given its urban fringe location, is likely to be subject to future encroaching urban development. With respect to the proposed Abbotstown pumping station, the site is likely to remain undeveloped as part of the parkland setting of the south-western corner of the Irish Sports Campus.</li> </ul>	
<b>Construction</b>	
<ul style="list-style-type: none"> <li>The GDD will give rise to significant landscape and visual effects throughout the construction period. The EIAR description of a moderate to slight impact is reasonable.</li> <li>Short term localised impacts associated with the orbital and outfall routes would generally be slight in terms of significance. This would include impacts related to loss of trees and hedgerows.</li> <li>The significance of impacts at the WwTP / SHC site would be greater due to the change in landscape character from agricultural to construction site, the use of cranes and the emerging structures which would be prominent in the low lying area. This is a moderate impact significance due to it being consistent with emerging trends and does not alter a sensitive aspect of the environment.</li> </ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"> <li>In the operational phase there are substantial impacts on houses to the north and west of the site (VP1 and VP4). The house to the north is unoccupied, VP 4 refers.</li> <li>The changes at the west near the egress would be visible to residents and to substantial numbers of passing motorists.</li> <li>Views from the Clayton Hotel would be of moderate impact significance as the development is in line with the emerging character including at the High Technology zoned lands.</li> </ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"> <li>Decommissioning is not proposed.</li> </ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"> <li>None identified.</li> </ul>	

#### 10.20.7. **Changes to the Baseline**

10.20.8. The main consideration in relation to landscape and visual policy change is the Fingal Development Plan 2023-2029. Chapter 12A states that there has been no material change to landscape and visual policy within the landscape and visual study area for the proposed project. The Fingal Landscape Character Assessment is brought through into the current Fingal Development Plan and still indicates that the proposed project is predominantly contained in the 'Low Lying Agriculture' character

type, but with the western and eastern portions contained in the 'River Valley and Canal' type and the 'Coastal' type, respectively. The landscape sensitivity assigned to each of these landscape character types in the current Fingal Development Plan remains the same as for the previous Fingal Development Plan.

10.20.9. The environs of Abbotstown pumping station remain largely the same as it did for the original assessment.

10.20.10. Portmarnock Greenway represents a new visual receptor running along the R106 Coast Road as is the Drumnigh Manor Housing estate since 2018; the 'Skylark' Phase of this development is within 500m of proposed temporary construction compound no. 9 that will be positioned adjacent to the west of the R106 Coast Road at Baldoyle Estuary.

10.20.11. The most noticeable changes to the baseline setting of the proposed project since 2018 occurs in the vicinity of the proposed WwTP, where a second hotel (Holiday Inn Dublin Airport) has been constructed immediately to the north of the Clayton Hotel Dublin Airport. These both lie around 500m to the west of the proposed WwTP site. There is also a recently completed residential estate running between Malahide Road (R107) and Belcamp College which is around 900m to the east of the proposed WwTP site at its nearest point.

10.20.12. The EIAR Addendum states that as the baseline photography used for the photomontages had been captured prior to 2018, it was considered necessary to recapture it. New photomontages have been prepared using the original design renders incorporated within the updated photography.

10.20.13. **Potential Effects per EIAR Addendum**

10.20.14. During construction:

- The additional visual receptor of the Baldoyle Portmarnock Greenway will afford close views of proposed temporary construction compound no. 9 at the western end of the proposed outfall pipeline route that will run under Baldoyle Estuary. I concur with the EIAR addendum wherein it states that it is not considered that the Greenway is of any greater visual sensitivity than the designated scenic route (High-Medium in the original assessment) and the viewing context is the same. Thus, it is not considered that the significance of

construction phase visual impact is any greater than was previously assessed in respect of the designated scenic route (Slight and Temporary).

- There will also be views of proposed temporary construction compound no. 9 from the recently completed phases of the Drumnigh Manor / Skylark residential developments that straddle the railway line to the north of the R123 Regional Road.

10.20.15. During operation:

- The addition of a new hotel and residential developments, to the west and east of the site respectively, have altered the baseline context to a minor degree. The EIAR Addendum judges the operational phase significance of landscape impact from the proposed WwTP remains as 'Moderate to Slight' on balance of a 'High' impact magnitude and a 'Low' landscape sensitivity.
- The proposed UV treatment facility and culvert works the subject of the further information submission will not have any bearing on the visual impact of the proposed development, given scale of works proposed.

10.20.16. **Mitigation**

10.20.17. The proposed mitigation measures in EIAR Chapter 12 included in Volume 3 Part A of the EIAR in the 2018 planning application remain effective in the management of landscape and visual impacts, including the updated project elements.

10.20.18. A Biodiversity Assessment (Appendix 2 of the Planning Report) has been prepared in response to which the applicant has updated the Landscape Mitigation Plans at the proposed WwTP and proposed pumping station sites to provide an annotation of the biodiversity assessment figures (refer to Figure 12.1 and Figure 12.2 in Volume 5A of the EIAR Addendum). The design itself, however, has not changed.

10.20.19. **Residual Effects**

10.20.20. There is no change in the predicted residual impacts compared with those identified in this Section of the EIAR in the 2018 planning application.



10.20.21. **Assessment:**

10.20.22. Having regard to the above, I am satisfied that the impacts identified would be avoided, managed or mitigated by measures forming part of the proposed development and proposed mitigation measures. I am satisfied that subject to the mitigation proposed the landscape and visual impacts would remain as Slight or Imperceptible.

10.20.23. **Conclusion**

10.20.24. I am satisfied that the proposed development would not have any unacceptable significant direct or indirect impacts on landscape.

10.21. **Vulnerability of Projects to Major Accidents and/or Natural Disasters**

10.21.1. **Issues Raised**

10.21.2. A number of third-party submissions raise concerns in relation to airport related risk and biogas storage. The HSE consider that the proposed development is assessed in terms of how it will adapt to the changing climate over its lifetime, considering both slower and sudden onset effects, following which a response plan should be put in place across the entire Emergency Management Framework.

10.21.3. The DAA reference objectives which promote appropriate land use patterns in the vicinity of the airport and request that the Board have regard to the density recommendation under Table 6.1 of the ERM Report, Public Safety Zones (2005), ensuring the development remains compliant with density restriction for working premises of 110 persons per half hectare during the hours of operation.

10.21.4. **Context**

10.21.5. EIAR Chapter 22 describes the vulnerability of the proposed project to major accidents and/or natural disasters. The EIAR Addendum, Chapter 22A, reviews any material changes to the original EIAR chapter and provides additional data, literature sources or policy developments of relevance. The Addendum Chapter provides an assessment of the validity of earlier conclusions and any amendments to these.

#### 10.21.6. **Potential Significant Effects**

10.21.7. The Board will note that section 22.4 of the EIAR sets out potential impacts of the GDD project in relation to risk of major accidents and/or disasters and section 9.8 of the Inspector's report ABP-301908 sets out the potential impacts of the GDD project in relation to major accidents and disasters and identifies the potential significant effects of the proposed development in this respect. For the purposes of clarity, and to avoid repetition, this section of my report deals with the potential significant effects of the development, as already identified in the EIA section of the Inspector's Report ABP-301908 and are summarised in Table 10.15 below. . Potential significant additional effects arising from the additional information are considered in section 10.21.6 below.

<b>Table 10.15: Summary of Vulnerability of Projects to Major Accidents and/or Natural Disasters</b>	
<b>Do Nothing</b>	
<ul style="list-style-type: none"><li>The 'do nothing' scenario will result in a failure to provide resilient sanitation infrastructure designed to meet wastewater demands.</li></ul>	
<b>Construction</b>	
<ul style="list-style-type: none"><li>Tunnelling event – this is Unlikely but there is potential for Serious Consequences.</li><li>Accidents related to power lines, which are Unlikely but would be Serious.</li><li>Pollution events related to release of silt to the aquatic environment is Likely prior to mitigation and potentially Serious due to impacts on Natura sites in particular. The same reasoning applies to other pollutants.</li><li>Road traffic accidents are Likely given the scale of the works and Serious.</li><li>Without mitigation a marine accident due to vessels colliding in the construction phase might be reasonably described as a Likely event and one which would potentially have fatal consequences and lead to environmental damage. A rating of Serious is reasonable.</li></ul>	
<b>Operational Impacts</b>	
<ul style="list-style-type: none"><li>Fire at the WwTP site or at Abbotstown – this is also Unlikely to occur but potentially is Serious in terms of risks to life and pollution.</li><li>Explosion related to biogas which in the absence of mitigation could be hazardous and result in pollution. In the absence of mitigation this could be considered to be a Likely risk and would be potentially Serious.</li><li>Significant odour release in the operational phase which prior to mitigation might be considered to be a Likely event but with Limited effects.</li></ul>	
<b>Decommissioning</b>	
<ul style="list-style-type: none"><li>Decommissioning is not proposed.</li></ul>	
<b>Cumulative Impacts</b>	
<ul style="list-style-type: none"><li>None identified in relation to the proposed GDD project.</li></ul>	

#### 10.21.8. **Changes to the Baseline**

10.21.9. A new risk category has been added in the Addendum assessment, as outlined in Table 22.2. This category evaluates the risk of extreme weather events

(including events resulting from climate change) on the proposed project. The addition of this risk category recognises and responds to developments in climate-related legislation, policy and knowledge base, which have emerged and evolved since the submission of the application in 2018.

**10.21.10. Potential Effect per EIAR Addendum**

10.21.11. The new risk category (extreme weather event) in this Addendum Chapter did not require the category to be brought forward for additional assessment. I agree that the decision to discount this additional low risk is acceptable.

10.21.12. The risk of a discharge of untreated sewage to the marine environment as a result of total failure of the proposed WwTP has been updated from 'unlikely' to 'very unlikely' i.e. 'would not occur'. I agree with the applicant that the amendment to the risk category likelihood does not change the outcome of the assessment, as it still does not present a sufficient combination of risk and consequence that would lead to significant residual impacts or environmental effects. I note and accept the opinion of the reporting Inspector on ABP-301908 that there is no credible risk to marine water quality as a result of total failure of the WwTP.

10.21.13. The EIAR Addendum states that there were no new risks identified as part of this Addendum assessment, and on the basis that the previously proposed mitigation measures remain up-to-date and valid.

**10.21.14. Mitigation**

10.21.15. Save for the addition of a Severe Weather Management Plan for both construction and operational phases which will be added to the Environmental Incident Response Plan, all other mitigation measures remain as they were in the 2018 EIAR.

**10.21.16. Residual Effects**

10.21.17. There is no change in the predicted residual impacts compared with those identified in this Section of the EIAR in the 2018 planning application.

10.21.18.      **Assessment**

10.21.19.      With respect to the HSE comments, I note that the Flood Risk Assessment report which was included as part of the further information did not find any flood risk to or as a result of the proposed project, the findings of which I agree with. I also note and accept that the implementation of an Environmental Incident Response Plan and the Environmental Management System by the appointed contractor / operator of the facility, as outlined in Chapter 24 (Summary of Mitigation Measures) will reduce risks of climate change-related weather events. The applicant and the site operator will maintain the Severe Weather Management Plan during the operational phase to ensure that critical infrastructure is protected during construction and operation from the impacts of severe weather.

10.21.20.      I am satisfied that the embedded design measures outlined in the 2018 EIAR, in relation to total or partial failure events, will protect the proposed project infrastructure against power outages resulting from storm events or other climate change-related demand issues. Furthermore, the development of a Severe Weather Management Plan as part of Environmental Incident Response Plan will ensure that critical infrastructure is protected during operation from the impacts of severe weather.

10.21.21.      With respect to third party concerns relating to airport related risk and biogas storage, I consider these matters were considered and assessed in the Inspector's Report ABP-301908 (page 228 and 229) and no additional information is submitted which warrants a departure of opinion from the Inspector's Report ABP-301908.

10.21.22.      With respect to DAA's comment regarding density restriction in safety zones, this matter is considered in section 9.8 above, under the heading Safeguarding Dublin Airport. In response to submissions, I note the applicant states that implementation of the proposed project would not give rise to conflict with the density restrictions prescribed by the ERM Public Safety Zones Report and that it would not be appropriate for any density restriction to be imposed on the proposed project. I am satisfied and accept the response provided.

10.21.23. **Conclusion**

10.21.24. The requirement to address the vulnerability of projects to major accidents and / or natural disasters under the EIA Directive is addressed by the applicant in Chapter 22 Volume 3 of EIAR, as updated by the Chapter 22A of the EIAR Addendum.

10.22. **Cumulative Impacts & Interactions**

10.22.1. EIAR Chapter 23 assesses cumulative impacts of the proposed development, and I note that at the Oral Hearing updated information was provided which informed the Inspector's Report ABP-301908. The EIAR Addendum Chapter 23A reviews any material changes to the original EIAR chapter and provides an updated cumulative impact assessment up to the time of the submission of the further information which included the EIA Addendum (October 2023). The updated cumulative impact assessment table can be found at Appendix A23.1.

10.22.2. Third parties and prescribed bodies (NTA and Iarnród Éireann) raise concerns regarding the cumulative impact of the proposed development with a number of developments, including, Huntstown Power Station, off-shore windfarms, Metrolink, other SID developments and razor clam dredging.

10.22.3. Table 2 in Appendix A23.1 in Volume 3A Part B of this EIAR Addendum presents the assessment of potential cumulative impacts for each of the 'other developments' carried forward for Stage 4 assessment. 159 developments were assessed for potential cumulative impacts with the proposed project.

10.22.4. In all it is considered in the EIAR Addendum that 3 no. projects have the potential to overlap in their temporal scope and to be likely to interact with the project having regard to their scale and nature and thus to give rise to potential significant cumulative effects. I note that the CEMP Addendum (page 7) provides for a coordinated approach between these developments and the proposed GDD project. These projects are:

- ABP 314487; (permitted) Howth Fishery Harbour Centre: development involves dredging, stabilisation of dredge material, reclamation of land, embankment construction, slipway construction, provision or storage and services at Howth Harbour, County Dublin. As outlined in Table 2 in Appendix

A23.1 in Volume 3A Part B of the EIAR Addendum, dredging activities for this other development and the Proposed Project will be required to be scheduled to occur at different times to avoid any adverse cumulative impacts which may occur on marine water quality as a result of increased suspended sediment from both projects. The CIA (Table 2 of Appendix 23A) also indicates that there is potential for cumulative impacts on marine biodiversity as a result of disturbance which I have assessed as marine mammals (see Appropriate Assessment, in-combination assessment and section 10.9 of this EIA that deals with Marine Biodiversity). I am satisfied that the scheduling of projects so they do not run concurrently as per the outline CEMP will also adequately mitigate cumulative impact on marine mammals.

- ABP 319422: (permitted) East Meath-North Dublin EirGrid Project involves the installation of a new 400 kilovolt underground cable between Woodland substation in County Meath and Belcamp substation in Fingal and will cross the proposed orbital sewer route in the vicinity of the proposed WwTP site. Table 2 in Appendix A23.1 of the EIAR Addendum states there should there be a temporal overlap between the two projects, a coordinated approach between the two project teams will be required to minimise potential soils and geology impacts in the vicinity of the proposed WwTP site.
- ABP 311315 (approved) – This other development is a park development project at the Racecourse Park comprising new walking and cycling routes including a bridge over the River Mayne and repair to the railway underpass on lands located between Baldoye and Portmarnock. As outlined in Table 2 in Appendix A23. of the EIAR Addendum, both projects will need to be coordinated to ensure that they do not take place at the same time in this location. A coordinated approach between the two project teams when each project's Construction Phase is taking place will also be required to minimise potential impacts on soils and geology in this vicinity. I am aware that at least certain elements of this scheme have been developed.

10.22.5. In addition to the foregoing, these more recent projects which were not considered in the EIAR Addendum have the potential to have cumulative impacts across a range of environmental factors during the construction phase of the proposed GDD project:

- ABP 319282-24: proposed waste facility at Huntstown and Coldwinters. The proposed orbital route transects the site.
- ABP 318677-23: permitted 110kV underground cable and substation at Fieldstown td. The proposed orbital route transects the site.
- FCC F15A/0609/ABP ref. PL06F.248052: permission extended to Gannon Properties for 5 years, expiring in 2027 for housing development at Belcamp Hall.
- ABP 317831-23: proposed 110 kV electricity circuits, close to the proposed WWTP and intersecting the proposed orbital and outfall routes.
- F24A/0974E: permission granted for undergrounding a section of the Grange-Collinstown 38kV overhead line at Stockhole Lane, Clonsaugh.
- ABP 317121-23: permitted Bus Connects Swords to City Centre bus corridor scheme. The proposed orbital route transects the site.
- ABP 320815-23 / FCC F23A/0636: proposed upgrades to drainage infrastructure and construction of additional drainage infrastructure at Dublin Airport.
- ABP 319422-24: permitted, 400 kV underground cable, intersecting the proposed orbital route at the site of the proposed WWTP.
- ABP 319866-24: proposed offshore windfarm (North Irish Sea Array), associated services – transects proposed outfall route.
- ABP-320164-24: DART railway order. The proposed outfall route transects the site.

10.22.6. Having regard to the foregoing and any subsequent application that may arise that may transect the proposed orbital/outfall route, I consider that in order to minimise potential cumulative impacts that a coordinated approach between the GDD project team and the teams of the above developments, in the event of permission where not already permitted, is facilitated. The CEMP is therefore required to capture this additional environmental mitigation measure.

10.22.7. With respect to following, raised by third parties:

- Huntstown Power Station, it was determined that an EIA was not required for that development, in this respect I agree with the applicant that there is no basis for the assertion that this project gives rise to lacunae in the cumulative impact assessment of the proposed project.
- In relation to periodic dredging of razor clams, I have considered this issue at section 10.9 above, and I am satisfied that the periodic dredging carried out in the context of normal fishing operations would not fall under the remit of EIA / AA cumulative or in-combination assessment.
- With respect to the cumulative impact of offshore windfarms, I consider that only one application (North Irish Sea Array) has potential for cumulative impact as the proposed project would transect with related onshore services. I am satisfied that any potential cumulative impacts can be minimised should works occur simultaneously through a coordinated approach that the CEMP can deal with (as outlined above). I note that the Appropriate Assessment which I have undertaken (at appendix 2 of this report) found no in-combination effects on European Sites with proposed off-shore windfarms.
- With regard to potential cumulative impact with the proposed Metrolink project, there is the potential for a temporal and spatial overlap between the two projects. This was assessed in the cumulative impact assessment, Appendix 23.1 of the EIAR, and I agree that subject to mitigation measures, i.e. adherence to the CEMP, Traffic Management Plan and noise monitoring that there will be no potential for significant cumulative impacts between the two projects.

10.22.8. Finally, to the permitted RBSF, which was granted planning permission by under ABP-301798, as part of the Ringsend Wastewater Treatment Plant Upgrade Project in April 2019, and as a result no longer forms part of the proposed development before the Board. The Board will note, however, that the further information submitted by the applicant as part of the current application, included an EIAR Addendum for the RBSF. Chapter 19 deals with cumulative impacts and is accompanied by Appendix 8C Greenhouse Gas Assessment in Volume 4A Part B.

10.22.9. As permission has been granted for the RBSF, it is not necessary to assess the impact of the RBSF. I have, however, considered same in respect of my EIA as



necessary, in particular its cumulative impact with the GDD project. The cumulative interactions with the proposed GDD project and the totality of the 'upgrade project (i.e. Ringsend WwTP upgrade and the RBSF) are considered at section 19.5 of the RBSF EIAR Addendum and it is concluded that there are no changes to the assessment of cumulative impact as a result of updates to the RBSF chapter on climate.

10.22.10. I note, and accept, the statement (at section 19.4.5.2 of the RBSF EIAR Addendum) that the RBSF component of the upgrade project will give rise to cumulative impacts with respect to climate. With respect to climate impacts of the RBSF, the assessment on climate states:

- The GHG emissions associated with the Construction Phase of the RBSF Component will be short-term and temporary in nature. The predicted impacts to climate across the timeframe of the Proposed RBSF Component due to the Construction Phase will be short-term, negligible and not significant.
- The predicted impacts to climate over the lifetime of the Proposed RBSF Component due to the Operational Phase, following the implementation of mitigation measures, will be Slight Adverse, Not Significant and Long Term.

10.22.11. Having regard to the foregoing, and the conclusion I have reached at section 10.17.28 of this EIA that the proposed GDD project will result in significant adverse impact I am of the opinion that as the RBSF is a component of the total system relating to the treatment of wastewater I conclude that the cumulative impact is significant and adverse in totality. However, I acknowledge the co-benefits of the RBSF Component extend beyond the impact of the emissions, providing storage for a circular biosolid fertiliser product, representing a sustainable development approach.

10.22.12. Subject to updating the CEMP to reflect the additional projects, I am satisfied that the impacts including those arising from interactions, indirect and cumulative impacts are not significant and can be avoided, managed and / or mitigated by the measures which are presented by the applicant in the EIAR and EIAR Addendum. I am satisfied that consent for the development can be permitted having regard to the significant effects, the resulting interactions between the environmental factors and the cumulative impacts.

## 10.23. Reasoned Conclusion on the Significant Effects

10.23.1. Having regard to the examination of environmental information contained above in the EIAR and EIAR Addendum, the Inspector's Report ABP-301908 and supplementary information provided at the Oral Hearing by the applicant and observers together with the written submission on file from the observers and prescribed bodies, I consider that the main significant effects of the proposed development on the environment remain as previously concluded by the Inspector ABP-301908, with the exception of:

- (i) effects arising from the then proposed **RBSF** which no longer forms part of the proposed development,
- (ii) an additional significant effect in relation to **climate change**, and
- (iii) **cumulative** impacts with other projects that require additional construction phase co-ordination and with respect to the cumulative effects with the RBSF in relation to climate.

10.23.2. The main significant effects are:

- Positive long-term impacts to **population and human health** from the provision of adequate wastewater and sludge treatment to support planned residential and economic growth in the Dublin region while securing compliance with European Directives and supporting legislation. Positive long-term indirect impacts to human health from the protection of bathing water and commercial shellfish areas.
- Significant negative temporary impacts on **population and human health** as a result of noise and vibration and disturbance during the construction phase. The sensitive receptors which are likely to be impacted include parts of Connolly hospital, St Francis hospice and some individual houses. Potential impacts on Connolly Hospital are minimised through design mitigation measures including the construction of a 1km tunnel to accommodate the orbital pipeline through the campus, by mitigation measures to ensure maintenance of emergency routes and by measures to minimise air and noise effects on the use of wards. Temporary rehousing of residents will be considered in the case of some individual residential properties, in the

absence of other mitigation being sufficient. Dust impacts and emissions from vehicles during the construction phase will have a temporary and highly localised impact. Notwithstanding the mitigation measures proposed, the residual impacts during the construction phase could still be significant albeit localised and temporary in duration.

- The adoption of conservative **odour** criteria minimises potential adverse impacts due to odour. The design, implementation and monitoring of odour abatement systems and adherence to the adopted criteria set out in the EIAR, EIAR Addendum and by an additional environmental condition will ensure that odour emissions do not reach a level that could cause odour nuisance at or beyond the site boundary of any of the facilities.
- Positive **marine water quality** impacts by the provision of wastewater treatment capacity to meet planned growth and to reduce reliance on Ringsend wastewater treatment plant.
- In the operation phase marine water quality impacts on shellfish areas are mitigated by the dispersal characteristics at the location of the diffuser and the design of the wastewater treatment plant and UV treatment. **Bathing water quality** will not be reduced even in the highly unlikely event of a failure of the plant due to the location of the diffuser in an area of high natural dispersal characteristics, the range of design measures and the control which can be exercised over flows to the plant. Excellent water quality at Velvet Strand will be maintained.
- The construction phase risks to **water quality** are avoided by the geological conditions including the depth of boulder clay separating existing shallow irrigation wells and Baldoyle Bay SAC from the microtunnelling under the estuary and are mitigated by use of trenchless crossings of streams, by the application of best practice including the measures set out in the CIRIA guidance and the adherence to IFI guidelines. There would be no significant residual impact. As a result of seabed dredging there will be impacts to marine water quality from suspended sediment increases, which would be of short duration. Subject to mitigation measures relating to deposition of

dredged material and monitoring there would be no significant residual impact.

- The location of all development and most of the construction in areas of low flood risk minimises potential water quality impacts relating to flooding in the construction phase and avoids downstream **flooding** of other lands. The location of compound 10 within Flood Zone A results in low level risk of adverse effects on the environment due to the proximity to European sites, which is mitigated by the measures in the CEMP including the piling method, bunding and use of best practice in relation to storage of material. The development will not result in any significant residual impacts relating to flooding.
- There is potential for a number of slight or short and very localised negative impacts to **marine biodiversity**. Air surface venting or bentonite breakout associated with tunnelling under Baldoyle Bay SAC would impact saltmarsh on a very small area for a short duration. Discharged sediment from dredging in the marine environment could impact on reefs, which is mitigated by the controlled discharge of dredge spoil. Underwater noise and vibration from works at the tunnel interface could lead to avoidance of the area by marine mammals, which is mitigated by use of marine mammal observations and passive acoustic monitoring during piling activities.
- There is potential for short-term moderate impacts on **birds** including bird species which are special conservation interests of Natura sites. This could result from visual disturbance impacts at microtunnelling compounds and the presence of vessels working in the marine environment during dredging and pipe laying. There is potential for disturbance to birds as a result of noise from piling at the interface and at the fibre optic cable. Mitigation measures which are presented will ensure that there are no significant residual impacts.
- Operational **traffic** will result in increased congestion at junctions which are already congested and which will be congested at the time of operation of the wastewater treatment plant. The proposed development will add to delays at those locations.

- During the construction phase, embodied carbon, traffic emissions and combined construction emissions will contribute a moderate, adverse and short-term impact on **climate**, and with mitigation will be reduced to minor adverse, not significant and short-term. During the operational phase, combined carbon emissions are moderate to major adverse, significant and long-term and following mitigation will have a moderate adverse, significant and long-term effect.
- There is potential for **cumulative impacts** during the construction phase on **marine mammals and marine water quality** as a result of dredging activities for the permitted Howth Harbour development (ABP 314487); on soils and geology as a result of the East Meath - North Dublin 400kV line and the Racecourse Park development (ABP 311315) and which will be mitigated by a coordinated approach between the project teams which is detailed in the CEMP Addendum. In addition to these projects, a number of other developments were identified in the EIA which may give rise to cumulative impacts across a range of environmental factors during the construction phase, and while short-term in duration, are best mitigated through additional coordination with the relevant project teams and the GDD project team. An additional environmental mitigation measure is necessary to ensure this coordination with other projects is captured in the CEMP.
- There is potential for significant **cumulative impacts on climate** arising from the totality of the wastewater treatment system when assessed together with the Regional Biosolids Storage Facility. However, the co-benefits of the totality of the treatment system extend beyond the impact of the emissions. Providing a circular biogas to power the WwTP and a biosolid fertiliser product, representing a sustainable development approach.

## 11.0 **Appropriate Assessment (AA)**

### 11.1. **Appropriate Assessment Conclusion: Integrity Test**

11.1.1. Appendix 1 to this report contains the AA Screening, Appendix 2 contains the AA itself.

11.1.2. In screening the need for Appropriate Assessment, it was determined that the proposed development could result in significant effects on:

- North-west Irish Sea candidate SPA (004236)
- Baldoyle Bay SAC (000199)
- Baldoyle Bay SPA (004016)
- Rockabill to Dalkey Island SAC (003000)
- Ireland's Eye SPA (004117)
- North Dublin Bay SAC (000206)
- North Bull Island SPA (004006)
- Malahide Estuary SPA (004025)
- Malahide Estuary SAC (000205)
- Howth Head Coast SPA (004113)
- South Dublin Bay and River Tolka Estuary SPA (004024)
- Rogerstown Estuary SAC (000208)
- Rogerstown Estuary SPA (004015)
- South Dublin Bay SAC (000210)
- Lambay Island SAC (000204)
- Lambay Island SPA (004069)
- Dalkey Islands SPA (004172)
- Skerries Islands SPA (004122)
- Rockabill SPA (004014)
- Codling Fault Zone SAC (003015)

in view of the conservation objectives of those sites and that Appropriate Assessment under the provisions of S177U/ 177AE was required.

11.1.3. I acknowledge that the revised NIS was prepared prior to the updating/addition of QI's for Lambay Island and Codling Fault Zone SAC and prior to the updating of

Conservation Objectives for several sites. Site specific conservation objectives exist for all screened-in European designated sites. I have had regard to the most recent data on the NPWS website and to an up to date in-combination assessment in preparing this AA. This AA has been informed having regard to specialists' reports prepared by

- Emmet Smyth (Inspectorate Scientist) Specialist report No. 1,
- Dr. Antony Knights (Consultant Marine Ecologist) Specialist Report No. 2 and
- Conor Donnelly (Inspectorate Marine Ecologist) Specialist Report No. 3.

11.1.4. I am satisfied that all aspects of the project which could result in significant effects have been considered and assessed in either the revised NIS and/or the additional documents (i.e. specialists' reports) referred to above. In addition, the mitigation measures designed to avoid or reduce any adverse effects on site integrity have been assessed for effectiveness.

11.1.5. Following an examination, analysis and evaluation of the revised NIS, all associated material submitted i.e. the further information, the Oral Hearing and specialists reports and taking into account observations of the DAU on behalf of the Department of Housing, Local Government and Heritage, I consider that adverse effects on site integrity of these sites can be excluded in view of the conservation objectives of these sites and that no reasonable scientific doubt remains as to the absence of such effects.

11.1.6. My conclusion is based on the following:

- Detailed assessment of construction and operational impacts and
- The effectiveness of mitigation measures proposed as detailed in section 7.0 of the Revised NIS and they relate to:
- North-West Irish Sea candidate SPA in respect of guillemot and razorbill;
- Baldoye Bay SAC in respect of mudflats and sandflats not covered by seawater at low tide;
- Baldoye Bay SPA in respect of brent goose;
- Rockabill to Dalkey Island SAC in respect of reefs and harbour porpoise;

- Ireland's Eye SPA in respect of guillemot and razorbill;
- Lambay Island SAC in respect of harbour porpoise, grey seal and harbour seal, and;
- Implementation of the outline CEMP and Surface Water Management Plan in respect of hydrological impact pathway across several designated sites.
- Application of planning conditions to ensure application of these measures.
- The proposed development will not affect the attainment of conservation objectives for these sites or any other designated site or prevent or delay the restoration of favourable conservation condition for any designated site.

## 12.0 Recommendation

- 12.1. As the application was remitted from the point at which the Inspector's report ABP-301908 was submitted in respect of the application, I recommend that the schedule of conditions, and reasons and considerations including the reasoned conclusion on significant effects are updated to reflect changes in legislation, policy, the applicant's further information and following consultation with the EPA in the intervening period from when the report of the Inspector's Report ABP-301908 was drafted.
- 12.2. The conditions include a standard environmental condition which requires the implementation of mitigation measures set out in the EIAR and Addendum (condition 3) and which includes additional environmental mitigation measures to address specific issues raised in my report. Implementation of the revised NIS is provided for by condition no.4.
- 12.3. The issue of site layout options for the proposed WwTP is discussed at section 9.9 of this Inspector's Addendum Report. I have concluded, having regard to the content of the EIAR and Addendum, that the EIAR and EIAR Addendum assessed the Activated Sludge Plant (ASP) option. In addition, detailed plans are submitted for the ASP option alone. I consider it appropriate therefore that a specific condition (condition no.2) is attached to the Schedule of Conditions which permits the ASP option unless a further consent alters the permission.
- 12.4. I consider that the proposed development, specifically the WwTP and SHC, represents a material contravention of the Fingal Development Plan 2023-2029 in



respect of greenbelt and open space land use zoning and open space land use zoning and I recommend that the Board exercise its power under section 37G(6) of the Planning and Development Act, 2000, as amended to grant permission for development even if the proposed development, or part thereof, contravenes materially the development plan relating to any area in which it is proposed to situate the development.

## 13.0 **Reasons and Considerations**

[draft Order]

In performing its functions in relation to the making of its decision, the Board had regard to:

- (a) Section 15(1) of the Climate Action and Low Carbon Development Act 2015, as amended by Section 17 of the Climate Action and Low Carbon Development (Amendment) Act 2021, and the requirement to, in so far as practicable, perform its functions in a manner (consistent with Climate Action Plan 2024 and Climate Action Plan 2025 and the national long term climate action strategy, national adaptation framework and approved sectoral adaptation plans set out in those Plans and in furtherance of the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State).
- (b) Directive 2000/60/EC, the Water Framework Directive and the requirement to exercise its functions in a manner which is consistent with the provisions of the Directive and which achieves or promotes compliance with the requirements of the Directive.

The Board also had regard to the following in coming to its decisions:

- (a) **European legislation**, including of particular relevance:

- The relevant provisions of EU Directive 2011/92/EU as amended by Directive 2014/52/EU (EIA Directive) on the assessment of the effects of certain public and private projects on the environment,
- Directive 92/43/EEC (Habitats Directive) and Directive 79/409/EEC as amended by 2009/147/EC (Birds Directives) which set the requirements for Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union.
- Directive 2000/60/EC for establishing a framework for Community action in the field of water policy.
- Directive 91/271/EEC concerning urban wastewater treatment, as updated by Directive (EU) 2024/3019.
- Directive 2006/118/EC concerning groundwater as updated by Directive 2014/80/EU.
- Directive 2006/7/EC concerning bathing water.
- Directive 2008/56/EC concerning marine environmental policy, as updated by Directive (EU) 2017/845.
- Directive 86/278/EEC concerning sewage sludge.
- Directive 91/676/EEC concerning nitrates.

(b) **National** legislation, including of particular relevance:

- European Communities Water Policy Regulations 2003, as amended.
- The European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended.
- The Urban Waste Water Treatment Regulations 2001, as amended.
- The Waste Water Discharge (Authorisation) Regulations 2007, as amended.
- The Bathing Water Quality Regulations 2008, as amended.
- The European Communities (Quality of Shellfish Waters) Regulations 2006, as amended.

- The European Communities Environmental Objectives (Groundwater) Regulations 2010, as amended.
- European Union (Good Agricultural Practice for the Protection of Waters) Regulations 2022.

(c) **National and regional** planning and related policy, including:

- The National Planning Framework – Ireland 2040, which contains objectives to increase wastewater treatment capacity, to develop the Greater Dublin Drainage project, and to provide increased uptake of anaerobic digestion.
- The National Development Plan – Ireland 2040, which identifies the Greater Dublin Drainage Project as one of the major infrastructure projects, which is required in the context of the National Planning Framework and accommodating growth and is described as a Strategic Investment Priority.
- Climate Action Plan 2025 & 2024, which seeks to develop resilience and adaptation of Ireland’s water infrastructure.
- The objectives and targets of the National Biodiversity Action Plan 2023-2030.
- The Water Services Policy Statement 2024-2030 which states that the Greater Dublin Drainage project is central to the growth priorities of the National Planning Framework.
- The Water Action Plan 2024: A River Basin Management Plan for Ireland which lists the proposed Greater Dublin Drainage project for investment.
- The Water Services Strategic Plan 2014-2021 which identifies the requirement for the Greater Dublin Drainage project in order to meet obligations under the Urban Wastewater Treatment Directive.
- The Uisce Éireann Strategic Funding Plan 2025 – 2029 which recognises the importance of the Greater Dublin Drainage project;
- The National Waste Management Plan for a Circular Economy 2024-2030.
- A Waste Action Plan for a Circular Economy 2020 – 2025.

- The National Wastewater Sludge Management Plan 2016 – 2041, which identified a need for a sludge hub centre for Fingal County to be developed as part of the Greater Dublin Drainage project.
- The Uisce Éireann Capital Investment Plan 2020-2024 which list the proposed Greater Dublin Drainage project as a strategic and significant project for which funding has been mandated.
- National Marine Planning Framework, Project Ireland 2040, which supports proposals for the treatment and disposal of wastewater by Uisce Éireann,
- The National Adaptation Framework - Planning for a Climate Resilient Ireland 2024
- The Greater Dublin Strategic Drainage Study (2005) and the Greater Dublin Drainage Strategy: Overview & Future Strategy (2018).
- The Regional Spatial and Economic Strategy for the Eastern and Midlands Regional Assembly (RSES) 2019-2031 which specifically supports the GDD project.
- The National Biodiversity Action Plan 2023-2030.

(d) The **local** planning policy including:

- The provisions of Fingal Development Plan 2023 – 2029, including Policies IUP3, IUP 4 and IUP5 to facilitate the provision of a new Regional Wastewater Treatment Plant, to support the delivery of the Greater Dublin Drainage project and the implementation of other recommendation of the Greater Dublin Strategic Drainage Study, and policy IUP9 to support energy extraction and other resources from sludge. Regard was also had to the Green Belt, High Technology and Open Space zoning objectives for the Clonshaugh site and to the other zoning objectives of the wider project and policies relating to ecological buffer zones.
- The provisions of the Dublin City Development Plan 2022-2028 including Policy SI1 to facilitate Uisce Éireann in the provision of wastewater services to meet the future needs of the city and the Region and section 9.5 which states

that the Greater Dublin Drainage project remains a critical wastewater infrastructure investment priority in the short-medium term.

- The provisions of the Dublin Airport Local Area Plan 2020 which states that the growth of Dublin Airport will be subject to the progress of the various improvement works and subject to the agreement of Irish Water, specifically referencing the Greater Dublin Drainage project.
- The provisions of the Meath County Development Plan 2021-2027, including objective INF OBJ 1 to promote the sustainable development of water supply and drainage infrastructure in the region in accordance with the Greater Dublin Drainage Study and the Water Services Strategic Plan.
- The Fingal County Council Climate Action Plan 2024-2029.
- The Fingal Biodiversity Action Plan 2023-2030.

**The following matters:**

- (a) the evidence provided that increased wastewater infrastructure capacity is required in the Dublin region in order to meet demands from planned growth and to divert load from the Ringsend Wastewater Treatment Plant.
- (b) the nature, scale and design of the proposed development including the Wastewater Treatment Plant and the Sludge Hub Centre, the level of water treatment which is proposed to be achieved and the suitability of the proposed land spreading of biosolids.
- (c) the adoption of conservative limits for odour at the site boundaries and the pattern of development in the vicinity of the proposed project components.
- (d) the design, layout, landscaping and architectural treatment of the proposed Wastewater Treatment Plant and Sludge Hub Centre and the architectural treatment of the proposed pumping station at Abbotstown.
- (e) the range of proposed mitigation measures set out in the submitted in the documentation lodged including the Environmental Impact Assessment Report and associated Addendum, and the revised Natura Impact Statement incorporating appropriate assessment screening.

- (f) the submissions made in relation to the application including those submitted at the Oral Hearing,
- (g) the likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development,
- (h) the independent Marine Ecologist Specialist report prepared by Dr. Antony Knights,
- (i) the Specialist Reports prepared by the Inspectorate Marine Ecologist and the Inspectorate Environmental Scientist,
- (j) the reports and recommendations of the Inspectors, comprising the report (ABP-301908), dated 10<sup>th</sup> October 2019, and the Addendum report (ABP-312131) dated 12th June 2025, including the examination, analysis and evaluation undertaken in relation to appropriate assessment and environmental impact assessment.

### **Appropriate Assessment: Stage 1**

The Board agreed with and adopted the screening assessment and conclusions carried out in the Inspector's Addendum report that the only European sites in respect of which the proposed development has the potential to have a significant effect are North-west Irish Sea candidate SPA (004236), Baldoyle Bay SAC (000199), Baldoyle Bay SPA (004016), Rockabill to Dalkey Island SAC (003000), Ireland's Eye SPA (004117), North Dublin Bay SAC (000206), North Bull Island SPA (004006), Malahide Estuary SPA (004025), Malahide Estuary SAC (000205), Howth Head Coast SPA (004113), South Dublin Bay and River Tolka Estuary SPA (004024), Rogerstown Estuary SAC (000208), Rogerstown Estuary SPA (004015), South Dublin Bay SAC (000210), Lambay Island SAC (000204), Lambay Island SPA (004069), Dalkey Islands SPA (004172), Skerries Islands SPA (004122), Rockabill SPA (004014) and Codling Fault Zone SAC (003015) are the European Sites for which there is a likelihood of significant effects.

## **Appropriate Assessment: Stage 2:**

The Board considered the revised Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions and observations on file, the Oral Hearing submissions and the Inspector's assessment contained in the Addendum report ABP-312131. The Board carried out an appropriate assessment of the implications of the proposed development for North-West Irish Sea candidate SPA (004236), Baldoyle Bay SAC (000199), Baldoyle Bay SPA (004016), Rockabill to Dalkey Island SAC (003000), Ireland's Eye SPA (004117), North Dublin Bay SAC (000206), North Bull Island SPA (004006), Malahide Estuary SPA (004025), Malahide Estuary SAC (000205), Howth Head Coast SPA (004113), South Dublin Bay and River Tolka Estuary SPA (004024), Rogerstown Estuary SAC (000208), Rogerstown Estuary SPA (004015), South Dublin Bay SAC (000210), Lambay Island SAC (000204), Lambay Island SPA (004069), Dalkey Islands SPA (004172), Skerries Islands SPA (004122), Rockabill SPA (004014) and Codling Fault Zone SAC (003015) in view of the sites' conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment.

In completing the appropriate assessment, the Board considered, in particular:

- (i) the likely direct and indirect impacts arising from the proposal, both individually, or in combination with other plans or projects,
- (ii) the mitigation measures, which are included as part of the current proposal, and
- (iii) the conservation objectives for the European sites.

In completing the appropriate assessment, the Board accepted and adopted the appropriate assessment carried out in the Inspector's Addendum report in respect of the potential effects of the proposed development on the aforementioned European sites, having regard to the sites' conservation objectives.

In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the sites' conservation objectives.

### **Environmental Impact Assessment:**

The Board completed an environmental impact assessment of the proposed development, taking into account:

- (a) the nature, scale and extent of the proposed development,
- (b) the Environmental Impact Assessment Report, EIAR Addendum and associated documentation submitted in support of the application,
- (c) the submissions and observations received from planning authorities, the observers and prescribed bodies in the course of the application and the submissions of the applicant, planning authorities, observers and prescribed bodies during the Oral Hearing,
- (d) the Inspector's Reports, together with the Specialists' Reports.

The Board considered that the Environmental Impact Assessment Report and associated Addendum, supported by the documentation submitted by the applicant, identifies and describes adequately the direct, indirect and cumulative effects of the proposed development on the environment. The Board is satisfied that the information contained in the Environmental Impact Assessment Report and associated Addendum complies with the provisions of EU Directive 2011/92/EU as amended by EU Directive 2011/92/EU.

The Board agreed with the summary and examination, set out in the Inspectors' reports, of the information contained in the Environmental Impact Assessment Report and associated Addendum and associated documentation submitted by the applicant and submissions made in the course of the application. The Board is satisfied that the Inspectors' reports set out how these various environmental issues were addressed in the examination and recommendation and are incorporated into the Board's decision. The Board also agrees to the additional mitigation measures to address EIA issues, as discussed and recommended in the Inspector's Addendum report, condition no. 3 refers (ABP-312131).

Notwithstanding the conclusion reached in respect of the inability of the proposed measures to fully mitigate the impact on climate (GHG emissions), it is considered that the environmental effects would not justify a refusal of planning permission having regard to the overall benefits of the proposed development. It is considered,



that in assessing and granting permission for the proposed development, the Board has, in so far as practicable, performed its functions in a manner consistent with the applicable climate plans and objectives as required by section 15 of the Climate Action and Low Carbon Development Act, 2015, as amended.

### **Reasoned Conclusions on the Significant Effects:**

The Board considered that the main significant direct and indirect effects of the proposed development on the environment are, and will be mitigated as follows:

- Positive long-term impacts to **population and human health** from the provision of adequate wastewater and sludge treatment to support planned residential and economic growth in the Dublin region while securing compliance with European Directives and supporting legislation. Positive long-term indirect impacts to human health from the protection of bathing water and commercial shellfish areas.
- Significant negative temporary impacts on **population and human health** as a result of noise and vibration and disturbance during the construction phase. The sensitive receptors which are likely to be impacted include parts of Connolly hospital, St Francis hospice and some individual houses. Potential impacts on Connolly Hospital are minimised through design mitigation measures including the construction of a 1km tunnel to accommodate the orbital pipeline through the campus, by mitigation measures to ensure maintenance of emergency routes and by measures to minimise air and noise effects on the use of wards. Temporary rehousing of residents will be considered in the case of some individual residential properties, in the absence of other mitigation being sufficient. Dust impacts and emissions from vehicles during the construction phase will have a temporary and highly localised impact. Notwithstanding the mitigation measures proposed, the residual impacts during the construction phase could still be significant albeit localised and temporary in duration.
- The adoption of conservative **odour** criteria minimises potential adverse impacts due to odour. The design, implementation and monitoring of odour abatement systems and adherence to the adopted criteria set out in the EIAR,

EIAR Addendum and an additional environmental condition will ensure that odour emissions do not reach a level that could cause odour nuisance at or beyond the site boundary of any of the facilities.

- Positive **marine water quality** impacts by the provision of wastewater treatment capacity to meet planned growth and to reduce reliance on Ringsend wastewater treatment plant.
- In the operation phase marine water quality impacts on shellfish areas are mitigated by the dispersal characteristics at the location of the diffuser and the design of the wastewater treatment plant and UV treatment. **Bathing water quality** will not be reduced even in the highly unlikely event of a failure of the plant due to the location of the diffuser in an area of high natural dispersal characteristics, the range of design measures and the control which can be exercised over flows to the plant. Excellent water quality at Velvet Strand will be maintained.
- The construction phase risks to **water quality** are avoided by the geological conditions including the depth of boulder clay separating existing shallow irrigation wells and Baldoyle Bay SAC from the microtunnelling under the estuary and are mitigated by use of trenchless crossings of streams, by the application of best practice including the measures set out in the CIRIA guidance and the adherence to IFI guidelines. There would be no significant residual impact. As a result of seabed dredging there will be impacts to marine water quality from suspended sediment increases, which would be of short duration. Subject to mitigation measures relating to deposition of dredged material and monitoring there would be no significant residual impact.
- The location of all development and most of the construction in areas of low flood risk minimises potential water quality impacts relating to flooding in the construction phase and avoids downstream **flooding** of other lands. The location of compound 10 within Flood Zone A results in low level risk of adverse effects on the environment due to the proximity to European sites, which is mitigated by the measures in the CEMP including the piling method, bunding and use of best practice in relation to storage of material. The

development will not result in any significant residual impacts relating to flooding.

- There is potential for a number of slight or short and very localised negative impacts to **marine biodiversity**. Air surface venting or bentonite breakout associated with tunnelling under Baldoyle Bay SAC would impact saltmarsh on a very small area for a short duration. Discharged sediment from dredging in the marine environment could impact on reefs, which is mitigated by the controlled discharge of dredge spoil. Underwater noise and vibration from works at the tunnel interface could lead to avoidance of the area by marine mammals, which is mitigated by use of marine mammal observations and passive acoustic monitoring during piling activities.
- There is potential for short-term moderate impacts on **birds** including bird species which are special conservation interests of Natura sites. This could result from visual disturbance impacts at microtunnelling compounds and the presence of vessels working in the marine environment during dredging and pipe laying. There is potential for disturbance to birds as a result of noise from piling at the interface and at the fibre optic cable. Mitigation measures which are presented will ensure that there are no significant residual impacts.
- Operational **traffic** will result in increased congestion at junctions which are already congested and which will be congested at the time of operation of the wastewater treatment plant. The proposed development will add to delays at those locations.
- During the construction phase, embodied carbon, traffic emissions and combined construction emissions will contribute a moderate, adverse and short-term impact on **climate**, and with mitigation will be reduced to minor adverse, not significant and short-term. During the operational phase, combined carbon emissions are moderate to major adverse, significant and long-term and following mitigation will have a moderate adverse, significant and long-term effect.
- There is potential for **cumulative impacts** during the construction phase on marine mammals and marine water quality as a result of dredging activities for the permitted Howth Harbour development (ABP 314487); on soils and

geology as a result of the East Meath - North Dublin 400kV line and the Racecourse Park development (ABP 311315) and which will be mitigated by a coordinated approach between the project teams which is detailed in the CEMP Addendum. In addition to these projects, a number of other developments were identified in the EIA which may give rise to cumulative impacts across a range of environmental factors during the construction phase, and while short-term in duration, are best mitigated through additional coordination with the relevant project teams and the GDD project team. An additional environmental mitigation measure is necessary to ensure this coordination with other projects is captured in the CEMP.

- There is potential for significant **cumulative impacts on climate** arising from the totality of the wastewater treatment system when assessed together with the Regional Biosolids Storage Facility. However, the co-benefits of the totality of the treatment system extend beyond the impact of the emissions. Providing a circular biogas to power the WwTP and a biosolid fertiliser product, representing a sustainable development approach.

The Board completed an environmental impact assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures set out in the Environmental Impact Assessment Report and associated Addendum and the additional environmental mitigation measure which requires coordination of construction between other specified projects and the proposed project, and subject to compliance with the conditions set out below, the effects on the environment of the proposed development, by itself and in combination with other development in the vicinity, would be acceptable. In doing so, the Board agree with and adopted the assessment and conclusions set out in the original Inspector's report (ABP-301908) as updated by the Addendum report (ABP-312131).

### **Proper Planning and Sustainable Development**

The Board considered that, subject to compliance with the conditions set out below, the proposed development would enable sustainable residential and economic growth through the delivery of increased wastewater treatment capacity and facilities

for sludge treatment, would be acceptable in terms of the quality of effluent discharged to the receiving water environment and would not result in a deterioration in the quality of bathing water or shellfish waters, would assist Ireland in meeting obligations set down under the Water Framework Directive and supporting Directives, national legislation and planning policy, would not be contrary to the designation of the Dublin Bay Biosphere and would be acceptable in terms of odour, noise, vibration, landscape, cultural heritage impacts and traffic. The Board accepted that the generation of GHG during operation as a result of emissions following mitigation remains a moderate adverse, significant and long-term effect on climate and will arise as a result of significant population growth projected to 2040. The Board acknowledges that the production of biogas which will be used on-site for energy recovery and the production of biosolids will assist in a shift towards a circular economy. Finally, the Board concluded that approval of the proposed development is consistent with the provisions of the Water Framework Directive and promotes compliance with the requirements of the Directive.

The Board reviewed all relevant zoning objectives of the Fingal Development Plan 2023-2029 and the Dublin City Development Plan 2022-2028 and is satisfied that the proposed development materially contravenes the greenbelt and open space zonings of the Fingal Development Plan 2023-2029 and adopts the Inspector's Addendum Report in this regard. The Board is satisfied that the proposed development otherwise complies with all other relevant provisions of the Fingal Development Plan 2023-2029 and the Dublin City Development Plan 2022-2028 and adopts the Inspector's Addendum Report in this regard.

The Board considered that the proposed development is of strategic importance having regard to the provisions of the National Planning Framework First Revision (2025), the Regional Spatial and Economic Strategy 2019-2031, Ireland's Water Action Plan 2024, the Government's Water Services Policy Statement 2018-2025, the Fingal Development Plan 2023-2029, the Dublin City Development Plan 2022-2028, the Meath County Development Plan 2021-2027 and the Kildare County Development Plan 2023-2029. The proposed development will contribute to meeting the objectives of these plans. It is considered that the proposed development would accord with European, national, regional and local planning policy and that it is

acceptable in respect of its likely effects on the environment and its likely consequences for the proposed planning and sustainable development of the area.

### CONDITIONS

1.	<p>The development shall be carried out and completed in accordance with the plans and particulars lodged with the planning application, as amended by the further information received by the Board on 26<sup>th</sup> October 2023, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to the commencement of development and the development shall be carried out and complied in accordance with the agreed particulars.</p> <p><b>Reason:</b> In the interest of clarity.</p>
2.	<p>The wastewater treatment plant, hereby permitted, shall be an activated sludge plant (ASP) to be carried out and completed in accordance with plans and details submitted with the application and further information. Any change to the plant type shall require a separate grant of permission.</p> <p><b>Reason:</b> In the interest of clarity.</p>
3.	<ul style="list-style-type: none"> <li>a) The mitigation measures contained in the submitted Environmental Impact Assessment Report (EIAR) and the applicant's further information on the 26<sup>th</sup> October 2023 including the EIAR Addendum, shall be implemented.</li> <li>b) The schedule of mitigation measures provided for in condition no. 5 shall include the following additional requirements for agreement with the planning authority:</li> <li>c) In relation to biodiversity: <ul style="list-style-type: none"> <li>(i) Prior to commencement of any works, a badger conservation plan shall be submitted to and agreed in writing with Fingal County Council. This plan shall incorporate a methodology and timetable</li> </ul> </li> </ul>

	<p>for the interference with and/or destruction of any badger set that might be required in order to undertake the construction of this project and to include all details of how it is intended to monitor the presence of badgers in the sett, safely exclude badgers from the sett whilst works are carried out in the vicinity or if necessary to destroy the sett.</p> <p>(ii) Prior to the commencement of any works, an amphibian conservation plan shall be submitted to and agreed in writing with Fingal County Council. This plan shall include methodologies for the identification of amphibian species, frog and smooth newt, populations at the various developmental stages at the pond sites at Coldwinters, adjacent to the Ballymun NCT Centre and at Tuberbunny on the orbital sewer route and for transferring these populations, under licence from the National Parks and Wildlife Service, out of the ponds to be affected by the laying of the proposed sewer.</p> <p>(iii) Prior to the commencement of any works, a plan for the establishment of one or more new ponds adjoining the route of the proposed orbital sewer through the 'waste ground' site to the northwest of the Ballymun NCT Centre shall be submitted to and agreed in writing with Fingal County Council. The plan shall provide for the transfer of elements of the existing plant communities present in the ponds currently located on this site which are to be impacted by the construction of the sewer into the new pond(s); in particular plants of the fen pondweed should be translocated to the new ponds as well as examples of the charophyte species, which are in addition present in the existing ponds.</p> <p>d) At Abbotstown Pumping Station and at Clonshaugh Wastewater Treatment Plant and Sludge Hub Centre, the adopted odour annoyance criterion of 1.5 OUE/m<sup>3</sup> as the 98th percentile of hourly averages shall not be exceeded at the boundaries of the sites.</p>
--	--

	<p>e) In relation to cumulative impact:</p> <p>(i) the CEMP shall include a list of potential other projects which may lead to cumulative impacts if construction phases run concurrently. A coordinated approach between the project teams will be required to minimise potential impacts.</p> <p><b>Reason:</b> To protect the environment.</p>
4.	<p>The mitigation measures contained in the submitted revised Natura Impact Assessment (NIS) shall be implemented.</p> <p><b>Reason:</b> To protect the integrity of European Sites.</p>
5.	<p>Prior to commencement of development, the developer shall submit for the written agreement of the planning authorities a comprehensive document containing all mitigation and monitoring measures set out in the Environmental Impact Assessment Report (EIAR) and EIAR Addendum, the revised Natura Impact Statement and other plans, and including the commitments given at the Oral Hearing (in respect of the development which no longer includes the RBSF). The document shall incorporate the monitoring and implementation proposals, as appropriate. This shall identify who is responsible for the implementation of these measures and a timescale for implementation.</p> <p><b>Reason:</b> In the interest of development control, public information and clarity.</p>
5.	<p>The period during which the development hereby permitted may be carried out shall be ten years from the date of this Order.</p> <p><b>Reason:</b> Having regard to the nature and extent of the proposed development, the Board considered it appropriate to specify a period of validity of this permission in excess of five years.</p>
6.	<p>Prior to commencement of development, a Noise, Vibration and Dust Management Plan shall be submitted to, and agreed in writing with, the planning authorities in respect of the construction phase of the Greater Dublin Drainage Project. The Plan shall comply with appropriate noise and</p>



	<p>vibration limits set out in the Environmental Impact Assessment Report and EIAR Addendum, in respect of the overall development. The Plan shall include measures to undertake works during school holidays where necessary to address any potential significant noise impacts on schools. The Plan shall incorporate detailed method statements to be prepared by the appointed contractor to address the specific noise and vibration impacts relevant to the operation of Connolly Hospital and St. Francis Hospice. The Plan shall include specific measures relating to the investigation and response to complaints. Noise monitoring during construction and commissioning and/or operation shall be carried out in accordance with the requirements of the planning authorities.</p> <p><b>Reason:</b> In the interest of the amenities of the surrounding area.</p>
7.	<p>The development shall comply with the requirements of the planning authorities with respect to surface water management.</p> <p><b>Reason:</b> In order to protect water quality and to avoid the creation of flood risk.</p>
8.	<p>Prior to commencement of development, a contract specific Construction and Environmental Management Plan (CEMP) and Surface Water Management Plan (SWMP) shall be submitted to and agreed in writing with the planning authorities in respect of the proposed development. This shall address matters relevant to Abbotstown Pumping Station and the tunnelled section of the Orbital Sewer through Connolly Hospital grounds, to Clonsaugh Treatment Plant and Sludge Hub Centre. The CEMP, which shall include matters specified in condition no. 3(c), 3(e) and 3(f), and the SWMP shall detail and ensure Best Construction Practice and compliance with statutory obligations.</p> <p><b>Reason:</b> To protect the environment during construction.</p>
9.	<p>(a) Prior to commencement of development, a Traffic Management Plan for the construction and operational phases shall be submitted to, and agreed in writing with, the planning authorities in respect of the proposed development of the Greater Dublin Drainage project. The applicant shall</p>

	<p>liaise with DAA, TII, NTA, Iarnród Éireann in preparing the Construction Traffic Management Plan.</p> <p>(b) Prior to commencement of development, a Construction Method Statement shall be submitted to and agreed in writing with Fingal County Council with respect to rail infrastructure. The applicant shall liaise with Iarnród Éireann in preparing the Construction Method Statement.</p> <p>(c) Prior to commencement of development, full details of any alterations to the public road network, including at the entrance to the Clonshaugh site, shall be agreed in writing with the planning authorities. All costs to facilitate these works shall be at the expense of the developer. All works in the public road shall be carried out only by the planning authorities.</p> <p>(d) The developer shall complete a Road Safety Audit, which shall be submitted to the planning authorities for written agreement. This shall address any measures to be implemented by the developer as part of the proposed development.</p> <p>(e) The developer shall comply with the requirements of the planning authorities in respect of minimising traffic disruption on the local communities and cleaning and repair of any damage to the public road networks during the construction and operation phases.</p> <p>(f) Prior to undertaking pre-construction surveys, the developer shall liaise with the planning authorities in relation to the proposal for pre-construction and post-construction visual surveys of the identified haulage routes. Details of these surveys and of the selected haulage routes shall be set out in the CEMP. Prior to completion of construction, the developer shall submit for the written agreement of the planning authorities a review of the identified haulage routes and a programme of remediation works, including timelines for undertaking works. All works shall be carried out to the satisfaction of the planning authorities.</p> <p>(g) Prior to commencement of operation, a Mobility Management Strategy shall be submitted to and agreed in writing with the planning authorities. This shall provide for incentives to encourage the use of public transport,</p>
--	---

	<p>cycling, walking and car-pooling by staff employed in the proposed development and to reduce and regulate the extent of staff parking. The mobility strategy shall be prepared and implemented by the operator. It shall provide for a phased roll out of measures appropriate to the changing nature of the area and the levels of available public transport.</p> <p><b>Reason:</b> To protect the existing road network, to ensure that the proposed development does not impede the delivery of future roads in the area and in the interest of traffic safety and the promotion of sustainable transport modes.</p>
10.	<p>(a) The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within and proximate to the Wastewater Treatment Plant site. In this regard, the developer shall –</p> <p>(b) Notify the Department of Housing, Local Government &amp; Heritage in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development.</p> <p>(c) Employ a suitably qualified archaeologist who shall monitor all topsoil stripping, site investigations and other excavation works.</p> <p>(d) Once each RMP or area of archaeological potential has been archaeologically excavated, a detailed technical report setting out the findings of excavations together with the studies already carried out in relation to the EIAR, and Addendum, shall be submitted to the planning authority.</p> <p>(e) Provide arrangements for the recording and for the removal of any archaeological material which the Department of Housing, Local Government and Heritage considers appropriate to remove.</p> <p>(f) Following consultation with the National Monuments Service and the National Museum, the developer shall agree with the planning authority the arrangements for post excavation analysis and archiving.</p>

	<p>(g) A final report on the completed archaeological works shall be submitted to the National Monuments Service, the National Museum and the Planning Authority within one year, unless otherwise agreed.</p> <p><b>Reason:</b> In order to conserve the archaeological heritage of the site and to secure the preservation and protection of any remains that may exist within the site.</p>
11.	<p>In relation to the protection of trees and hedgerows, the following requirements shall apply:</p> <p>(a) The developer shall appoint an arborist who shall oversee the preparation of a detailed tree and hedgerow survey and protection plan which shall incorporate precise measures to protect trees and hedgerows during construction.</p> <p>(b) The plan shall be submitted to the planning authorities for written agreement prior to commencement of development.</p> <p>(c) The plan shall minimise tree removal in the vicinity of St. Caoimhin's Church and graveyard and shall minimise the loss of hedgerows, which are also townland boundaries. The exact boundary of the construction compound at St. Caoimhin's Church shall be agreed with the relevant planning authority.</p> <p>(d) The identification in the plan of trees to be removed and reinstatement of hedgerows shall be informed by the recommendation of a bat specialist who shall liaise with the arborist.</p> <p><b>Reason:</b> In the interest of landscape and visual amenities and to ensure the protection of cultural heritage and biodiversity.</p>
12.	<p>Prior to commencement of development, the developer shall submit to, and agree in writing with the planning authorities, a detailed landscape plan for each of the proposed development components of the Greater Dublin Drainage Project. The landscape plan shall include, inter alia, full details of all external finishes and boundary treatment at the Abbotstown Pumping Station and the Wastewater Treatment Plant site, exact siting, screening, decommissioning and restoration of all construction compounds, general</p>

	<p>landscape details, including timescales for implementation, and the landscaping shall be carried out in accordance with the agreed details thereafter. The landscape plan shall incorporate proposals for lighting which shall minimise light spillage to the boundaries of the Abbotstown Pumping Station and Clonshaugh sites.</p> <p><b>Reason:</b> In the interest of landscape and visual amenities and to ensure the protection of biodiversity.</p>
13.	<p>Proposals for a name of the Clonshaugh Wastewater Treatment Facility and of the Wastewater Education Zone shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.</p> <p><b>Reason:</b> To ensure that the wastewater education zone is suitably identified and to highlight its function as a community resource.</p>
14.	<p>Following consultation with the Dublin Airport Authority and the Irish Aviation Authority the development shall submit to and agree in writing with the planning authority proposals for the erection of cranes.</p> <p><b>Reason:</b> In the interest of aircraft safety.</p>
15.	<p>The operation of the proposed Wastewater Education Zone shall be in accordance with a program of measures to be agreed with the relevant planning authority and to include measures to target local schools.</p> <p><b>Reason:</b> To offset the impacts on the local community in the construction phase and to maximise the long-term benefits of the education facility to local residents.</p>
16.	<p>The developer shall pay to the planning authority (Fingal County Council) a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of</p>

	<p>payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to An Bord Pleanála to determine the proper application of the terms of the Scheme.</p> <p><b>Reason:</b> It is a requirement of the Planning and Development Act 2000, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.</p>
--	---

I confirm that this report represents my professional planning assessment, Judgment and opinion on the matter assigned to me and that no person has influence or sought to influence, directly or indirectly, the exercise of my professional Judgment in an improper or inappropriate way.

---

Alaine Clarke

Senior Planning Inspector

12<sup>th</sup> June 2025

## **Appendix 1**

### **AA Screening Determination**

## Appendix 1 – AA Screening Determination

Screening for Appropriate Assessment	
Test for likely significant effects	
<b>Step 1: Description of the project and local site characteristics</b> <b>Case file: ABP 312131</b>	
<b>Brief description of development characteristics and potential impact mechanisms</b>	<p>Development of a project known as the Greater Dublin Drainage (GDD) project and involves the provision of new wastewater treatment works, a marine outfall, and a new drainage network in the northern part of the GDA, comprising:</p> <ul style="list-style-type: none"> <li>Proposed WwTP to be located on a 29.8 hectare (ha) site in Clonsaugh, Fingal;</li> <li>Sludge Hub Centre (SHC) to be co-located on the same site as the WwTP;</li> <li>Proposed orbital sewer route from Blanchardstown to the proposed WwTP at Clonsaugh, c. 13.7km in length;</li> <li>Proposed odour control unit (OCU) at the interface between the rising main and gravity sewer elements of the proposed orbital sewer route;</li> <li>Proposed North Fringe Sewer (NFS) diversion sewer, c. 600 m in length, to the proposed WwTP;</li> <li>Proposed Abbotstown pumping station to be located in the grounds of the National Sports Campus ;</li> <li>Proposed outfall pipeline route, c. 11.4 km in length, from the proposed WwTP to the outfall point approximately 1km north-east of Ireland's Eye; and</li> <li>The inclusion of ultraviolet (UV) treatment at the proposed wastewater treatment plant (WwTP); and</li> <li>The extension of the River Mayne Culvert along the proposed access road to the proposed WwTP.</li> </ul> <p>A detailed description of the proposed development is provided in section 3.0 of the Inspector's Report and detailed specifications of the proposal are provided in the AA screening report/NIS and other planning documents provided by the applicant.</p> <p>The project traverses four European sites: Baldoyle Bay SAC, Baldoyle Bay Spa, Rockabill to Dalkey Island SAC and North-West Irish Sea cSPA. Further details with respect to these sites and proximate sites:</p> <ul style="list-style-type: none"> <li>Baldoyle Bay SAC – the outfall pipeline (marine section) passes under this site and construction compounds adjoin the site. The pipeline commences close to the R106 at the point of the tunnel launch shaft</li> </ul>



	<p>and is routed in a north-easterly direction terminating north east of Ireland's Eye. It crosses under the SAC to a point 600m offshore where it exits the tunnel and continues in an easterly direction.</p> <ul style="list-style-type: none"> <li>• Baldoyle Bay SPA – the outfall pipeline (marine section) passes under this site and construction compounds adjoin the site. The pipeline commences close to the R106 at the point of the tunnel launch shaft and is routed in a north-easterly direction terminating north east of Ireland's Eye. It crosses under the SPA to a point 600m offshore where it exits the tunnel and continues in an easterly direction.</li> <li>• Rockabill to Dalkey Island SAC – 1300m of outfall pipeline and the marine diffuser are within this site. The same 1,300m section lies north of Ireland's Eye SPA and SAC and south of Lambay Island SAC.</li> <li>• North-West Irish Sea cSPA - The length of the marine-based outfall pipeline beyond Velvet Strand to the terminal marine diffuser (4,800m) is located within the North-West Irish Sea cSPA.</li> </ul> <p>Other relevant works comprise:</p> <ul style="list-style-type: none"> <li>• Mayne River will be crossed once by the orbital sewer just north of the M50 and south of Ballystruan. A culvert will also be constructed at the site of the proposed access road to the WwTP discharges to Baldoyle Bay. A tributary of this river, the Cuckoo Stream will be crossed once by the orbital sewer directly downstream of the new WwTP. The proposed WwTP lies directly south of the Cuckoo Stream.</li> <li>• Santry River will be crossed once by the orbital sewer at Silloge. A satellite compound will be located at the M50 Interchange No. 4, and will be located approximately 100m from this river.</li> <li>• The proposed Pumping Station and access road at Abbotstown is located ca. 30m from the Tolka River, which flows into the Tolka Estuary.</li> <li>• The proposed pipeline is located within the Santry, Mayne and Tolka River catchments which flow to Dublin Bay and Baldoyle Bay.</li> </ul>
Screening report	Yes (prepared by RPS)
Natura Impact Statement	Yes (prepared by RPS)
Relevant submissions	<p>The DAU has submitted observations on behalf of the Department of Housing, Local Government and Heritage (DHLGH). Issues raised include the following related to the appropriate assessment process:</p> <ul style="list-style-type: none"> <li>• Together with Rockabil to Dalkey Island SAC the project (route of the outfall pipeline from the Velvet</li> </ul>

	<p>Strand to the outfall discharge point) will now also be within the <u>North-west Irish Sea cSPA</u>.</p> <p>Third party observations issues raised:</p> <ul style="list-style-type: none"> <li>• Precautionary principle of the Habitats Directive be used to protect named SACs and SPAs and named shellfish waters.</li> <li>• No stage 2 NIS assessment re waterbirds for Baldoye Bay SPA.</li> <li>• Impact on Light-bellied Brent Geese and other Baldoye SPA SCIs</li> <li>• Screening out of Ireland Eye SAC and Howth Head SAC/Howth Head Coast SPA.:</li> <li>• Bentonite and air breakout risk tunnelling under the estuary.</li> <li>• No management plans for Ireland's Eye SAC/SPA, Baldoye SAC/SPA, Rockabill to Dalkey SAC and others.</li> <li>• Lack of consideration given to in-combination impact of other projects.</li> <li>• Findings of the assessment are not complete, precise and definitive.</li> <li>• Impact on Harbour Porpoise/cetaceans.</li> </ul>
--	---

## Step 2. Identification of relevant European sites using the Source-pathway-receptor model

24 no. European sites are potentially within a zone of influence of the proposed development.

European Site (code)	Qualifying interests Link to conservation objectives (NPWS, date)	Distance from proposed development	Ecological connections	Consider further in screening Y/N
North-West Irish Sea candidate SPA (004236)	<p>Red-throated Diver; Great Northern Diver; Fulmar; Manx Shearwater; Cormorant; Shag; Common Scoter; Little Gull; Black-headed Gull; Common Gull; Lesser Black-backed Gull; Herring Gull; Great Black-backed Gull; Kittiwake; Roseate Tern; Common Tern; Arctic Tern; Little Tern; Guillemot; Razorbill; Puffin</p> <p><a href="#">CO004236.pdf</a></p> <p>19 Sep 2023</p>	Marine outfall passes through this SPA	Hydrological (water quality and habitat deterioration) Airborne noise / disturbance Habitat loss	Y

Baldoyle Bay SAC (000199)	Mudflats and sandflats not covered by seawater at low tide; Salicornia and other annuals colonizing mud and sand; Atlantic salt meadows; Mediterranean salt meadows.  <a href="#">Site specific cons obj</a>  NPWS 19 Nov 2012	Marine outfall passes through SAC	Hydrological (water quality and habitat deterioration) Underwater noise / disturbance Habitat loss	Y
Baldoyle Bay SPA (004016)	Brent Goose; Shelduck; Ringed Plover; Golden Plover; Grey Plover; Bar-tailed Godwit; Wetlands  <a href="#">ConservationObjectives.rdl</a>  NPWS 27 Feb 2013	Marine outfall passes through SPA	Hydrological (water quality and habitat deterioration) Airborne noise/disturbance Habitat loss	Y
Rockabill to Dalkey Island SAC (003000)	Reefs; Harbour Porpoise  <a href="#">ConservationObjectives.rdl</a>  NPWS 7 May 2013	1,300m of marine outfall and the diffuser in SAC	Hydrological (water quality and habitat deterioration) Underwater noise / disturbance Habitat loss	Y
Ireland's Eye SAC (002193)	Perennial vegetation of stony banks; vegetated sea cliffs  <a href="#">ConservationObjectives.rdl</a>  NPWS 27 Jan 2017	1 km south of marine outfall.	Designated for coastal not marine habitats. No hydrological link and no open pathway of effect. No likelihood of significant effects.	N
Ireland's Eye SPA (004117)	Cormorant; Herring Gull; Kittiwake; Guillemot; Razorbill  <a href="#">CO004117.pdf</a>  NPWS 12 Nov 2024	0.4 km south-west of the marine outfall.	Hydrological (water quality and habitat deterioration) Airborne noise/disturbance Habitat loss	Y
North Dublin Bay SAC (000206)	Mudflats and sandflats not covered by seawater at low tide; Annual vegetation of drift lines; Salicornia and other annuals colonising mud and sand; Atlantic salt meadows; Mediterranean salt meadows; Embryonic shifting dunes; Shifting dunes; Fixed coastal dunes; Humid dune slacks; Petalwort  <a href="#">ConservationObjectives.rdl</a>  NPWS 6 Nov 2013	2.3 km south of the marine outfall	Hydrological (water quality and habitat deterioration)	Y

North Bull Island SPA (004006)	Brent Goose; Shelduck; Teal; Pintail; Shoveler; Oystercatcher; Golden Plover; Grey Plover; Knot; Sanderling; Dunlin; Black-tailed Godwit; Bar-tailed Godwit; Curlew; Redshank; Turnstone; Black-headed Gull; Wetlands  <a href="#">ConservationObjectives.rdl</a>  NPWS 9 March 2015	2.3 km south of the marine outfall	Hydrological (water quality and habitat deterioration) Airborne noise /disturbance Habitat loss	Y
Malahide Estuary SPA (004025)	Great Crested Grebe; Light-bellied Brent Goose; Shelduck; Pintail; Goldeneye; Red-breasted Merganser; Oystercatcher; Golden Plover; Grey Plover; Knot; Dunlin; Black-tailed Godwit; Bar-tailed Godwit; Redshank; Wetlands  <a href="#">ConservationObjectives.rdl</a>  16 August 2013	2.5 km to the north of the marine outfall	Hydrological (water quality and habitat deterioration) Airborne noise/disturbance Habitat loss	Y
Malahide Estuary SAC (000205)	Mudflats and sandflats not covered by seawater at low tide; Salicornia and other annuals colonising mud and sand; Spartina swards; Atlantic salt meadows; Mediterranean salt meadows; Shifting dunes; Fixed coastal dunes.  <a href="#">ConservationObjectives.rdl</a>  27 May 2013	2.5 km to the north of the marine outfall	Hydrological (water quality and habitat deterioration)	Y
Howth Head Coast SPA (004113)	Kittiwake <a href="#">CO004113.pdf</a>  29 Oct 2024	2.6 km to the south of the marine outfall	Hydrological (water quality and habitat deterioration) Airborne noise /disturbance Habitat loss	Y
Howth Head SAC (000202)	Vegetated sea cliffs of the Atlantic and Baltic coasts; European dry heaths.  <a href="#">ConservationObjectives.rdl</a>  06 Dec 2016	2.6 km to the south of the marine outfall	Designated for coastal not marine habitats. No hydrological link and no open pathway of effect. No likelihood of significant effects.	N
South Dublin Bay and River	Light-bellied Brent Goose; Oystercatcher; Ringed Plover; Grey Plover; Knot;	7.6km south of the marine outfall.	Hydrological (water quality and habitat deterioration)	Y

Tolka Estuary SPA (004024)	Sanderling; Dunlin; Bar-tailed Godwit; Redshank; Black-headed Gull; Roseate Tern; Common Tern; Arctic Tern; Wetland and Waterbirds.  <a href="#">ConservationObjectives.rdl</a>  09 March 2015	Ballasting and pipe assembly may occur at Dublin Port near Tern breeding sites.	Airborne noise /disturbance Habitat loss.	
Rogerstown Estuary SAC (000208)	Estuaries; Mudflats and sandflats not covered by seawater at low tide; Salicornia and other annuals colonising mud and sand; Atlantic salt meadows; Mediterranean salt meadows; Shifting dunes along the shoreline; Fixed coastal dunes with herbaceous vegetation.  <a href="#">ConservationObjectives.rdl</a>  14 August 2013	8.5 km north of marine outfall.	Hydrological (water quality and habitat deterioration)	Y
Rogerstown Estuary SPA (004015)	Greylag Goose; Brent Goose; Shelduck; Shoveler; Oystercatcher; Ringed Plover; Grey Plover; Knot; Dunlin; Black-tailed Godwit; Redshank; Wetlands  <a href="#">ConservationObjectives.rdl</a>  20 <sup>th</sup> May 2013	8.5 km north of marine outfall.	Hydrological (water quality and habitat deterioration) Airborne noise /disturbance Habitat loss.	Y
South Dublin Bay SAC (000210)	Mudflats and sandflats not covered by seawater at low tide; Annual vegetation of drift lines; Salicornia and other annuals colonising mud and sand; Embryonic shifting dunes  <a href="#">ConservationObjectives.rdl</a>  22 August 2013	9.1 km south of the marine outfall	Hydrological (water quality and habitat deterioration)	Y
Lambay Island SAC (000204)	Reefs; Vegetated sea cliffs of the Atlantic and Baltic coasts; Harbour Porpoise Grey Seal; Harbour Seal  <a href="#">CO000204.pdf</a>  17 Dec 2024	9.3 km north-east of marine outfall	Hydrological (water quality and habitat deterioration)  Underwater noise / disturbance	Y

Lambay Island SPA (004069)	Fulmar; Cormorant; Shag; Greylag Goose; Lesser Black-backed Gull; Herring Gull; Kittiwake; Guillemot; Razorbill; Puffin;  <a href="#">CO004069.pdf</a>  19 Nov 2024	9.3 km north-east of marine outfall	Hydrological (water quality and habitat deterioration) Airborne noise /disturbance Habitat loss	Y
Dalkey Islands SPA (004172)	Roseate Tern; Common Tern; Arctic Tern  <a href="#">CO004172.pdf</a>  29 Oct 2024	14.9 km south of the marine outfall	Hydrological (water quality and habitat deterioration) Airborne noise /disturbance Habitat loss	Y
Skerries Islands SPA (004122)	Cormorant; Shag; Light-bellied Brent Goose; Purple Sandpiper; Turnstone; Herring Gull  <a href="#">CO004122.pdf</a>  19 Nov 2024	16.7 km north of the marine outfall	Hydrological (water quality and habitat deterioration) Airborne noise /disturbance Habitat loss	Y
Rockabill SPA (004014)	Purple Sandpiper; Roseate Tern; Common Tern; Arctic Tern  <a href="#">ConservationObjectives.rdl</a>  08 May 2013	16.9 km north of the marine outfall	Hydrological (water quality and habitat deterioration) Airborne noise /disturbance Habitat loss	Y
Codling Fault Zone SAC (003015)	Submarine structures made by leaking gases; Harbour Porpoise  <a href="#">CO003015.pdf</a>  14 Jan 2025	25 km east of project	Hydrological (water quality and habitat deterioration)  Underwater noise / disturbance	Y
Glenasmole Valley SAC (001209)	Semi-natural dry grasslands and scrubland facies on calcareous substrates; Molinia meadows on calcareous, peaty or clayey-silt-laden soils; Petrifying springs with tufa formation  <a href="#">CO001209.pdf</a>  10 Dec 2021	14.8km south of the project	No potential for effects as no connecting pathways potentially within zone of influence	N
Rye Water Valley / Carton SAC (001398)	Petrifying springs with tufa formation; Narrow-mouthed Whorl Snail; Desmoulin's Whorl Snail	8.7 km west of project	No potential for effects as no connecting pathways	N

	<a href="#">CO001398.pdf</a> 22 Dec 2021		potentially within zone of influence	
--	---	--	---	--

24 no. sites were considered in the screening stage. As recorded above for 4 no. European sites there is no potential pathway. These sites are considered below.

**Ireland's Eye SAC (002193):** I have considered the application documentation including the Inspector's Report ABP-301908, the Oral Hearing documents, in particular Mr. Wilson's (Ecologist for applicant) statement (OH 64) which inter-alia dealt with screening out Ireland's Eye.

With regards the 'vegetated sea cliffs' (note there is an error in his document, the QI he is referring to is 'Vegetated sea cliffs of the Atlantic and Baltic coasts, 1230' rather than 'Perennial vegetation of stony banks, 1220'), he states that this site is a terrestrial habitat and there is no connection between the aquifer that supports the soils on the island and the marine works. The aquifer that supports surface soils will be isolated from the marine section of the works by this underlying formation. There is no proposed work on the island as part of the proposed project and therefore there is no potential for LSE.

With regards the perennial vegetation of stony banks (1220) QI, Mr. Wilson considered possible pathway with the proposed project via sea spray. He noted that the vegetation is on the opposite side of the works to the project / plume trajectory and in sheltered areas where there is no likelihood of significant sea spray. Should it occur, the impact from seawater spray would not cause any impact to this habitat as elevations in suspended sediments or other elevated nutrients would be imperceptible. The plume effects are shown to be negligible in terms of construction phase water quality impacts. In the operational phase the plume has been shown not to impact the waters immediately adjacent the SAC. There would be no impact from the imperceptible elevations in suspended sediments or nutrients in the unlikely event that sea water spray did contact the habitat.

Based on this statement and the available information presented in the EIAR, EIAR Addendum and the revised NIS, and having regard to the nature and location of the proposed outfall relative to QIs, I am satisfied that this SAC can be eliminated from further assessment because the proposed development could not have any effect on this European Site, as stated above with regards the vegetated sea cliffs, due to a lack of connection between the aquifer that supports the soils on the island and the marine works, and with regards the perennial vegetation of shingle banks, the vegetation is on the opposite side of the works to the plume trajectory and in an area where there is no likelihood of significant sea spray. I conclude, on the basis of objective information, that the proposed development would not have a likely significant effect on this European Site either alone or in combination with other plans or projects. No mitigation measures are required to come to these conclusions.

In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of the information considered in this AA screening, I conclude that the proposed development individually or in combination with other plans or projects would not be likely to give rise to significant effects on Ireland's Eye SAC in view of the conservation objectives of this site and is therefore excluded from further consideration. Appropriate Assessment is not required for this site.

The Board will note that the Ireland's Eye SAC was screened out by the reporting Inspector ABP-301908 and that screening out of Ireland's Eye SAC withstood legal challenge in *Kemper v An Bord Pleanála*.

**Howth Head SAC (000202):** I have considered the application documentation including the Inspector's Report ABP-301908 and the Oral Hearing documents. The QI's for this site, vegetated sea cliffs of the Atlantic and Baltic coasts and European dry heaths are coastal terrestrial habitats which are a considerable distance from the project in terms of any pathways which might give rise to significant effects. In relation to the construction and operational plumes the site is to the south and therefore away from and in the opposite direction to the area which might be affected (see section 8.4 of the EIAR and 6.2 of the revised NIS). In any case at a distance of 2.6km from the development site there would be no discernible changes in water quality in the construction or operational phases. The rational applied to screening out Ireland's Eye SAC, also applies to Howth Head SAC.

I am satisfied that this SAC can be eliminated from further assessment because the proposed development could not have any effect on this European Site, with regards the vegetated sea cliffs, due to a lack of connection to the soils on the island and the marine works, and with regards the European dry heaths, these occur above the sea cliffs and in the central part of the peninsula away from the plume trajectory and in an area where there is no likelihood of significant sea spray.

I conclude, on the basis of objective information, that the proposed development would not have a likely significant effect on this European Site either alone or in combination with other plans or projects. No mitigation measures are required to come to these conclusions.

In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of the information considered in this AA screening, I conclude that the proposed development individually or in combination with other plans or projects would not be likely to give rise to significant effects on Howth Head SAC in view of the conservation objectives of this site and is therefore excluded from further consideration. Appropriate Assessment is not required for this site.

The Board will note that The Board will note that the Howth Head SAC was screened out by the reporting Inspector ABP-301908 and that the screening out of Howth Head SAC withstood legal challenge in *Kemper v An Bord Pleanála*.

**Glenasmole Valley SAC (001209):** There is no potential for effects on the site as there are no potential pathways such as streams or rivers within the zone of influence.

**Rye Water Valley / Carton SAC (001398):** There are no connecting pathways such as streams or rivers within the zone of influence.

### Step 3. Describe the likely effects of the project (if any, alone or in combination) on European Sites

#### AA Screening matrix

Site Name (see Step 2 above for QI/SCIs and distance to site)	Possibility of significant effects (LSEs) (alone) in view of the conservation objectives of the site*	
	Impacts	Effects
North-West Irish Sea candidate	Marine outfall pipeline will be installed in a tunnel that passes below the SPA.	LSEs upon SCI species as a result of noise and visual



SPA (004236)	<p>Possible deterioration of water quality in the marine environment within the SPA arising from construction and operational sediment/ pollution plumes resulting in change in foraging potential.</p> <p>Possible disturbance or displacement of SCI species using marine waters as a result of construction stage activities.</p>	<p>disturbance within the SPA cannot be excluded.</p> <p>LSEs upon water quality in the SPA as a result of plumes at construction or operational phase cannot be excluded.</p> <p>LSEs upon SCI species as a result of habitat loss within the SPA boundary as a result of excavation of seabed, deposition and stockpiling of excavated material and pipe laying operations cannot be excluded without further analysis.</p>
Baldoyle Bay SAC (000199)	<p>Marine outfall pipeline will be installed in a tunnel that passes below the SAC.</p> <p>Possible deterioration of water quality of estuarine habitats due to pollution events or elevated suspended solids during construction upstream of this site.</p> <p>Possible deterioration of water quality of estuarine habitats due to pollution events or suspended sediment plumes during construction including bentonite blowout or surface venting.</p> <p>Possible deterioration of water quality of estuarine habitats due to plume arising from operation of project.</p> <p>There is the potential for bentonite release or surface venting during the tunnelling operations that could lead to habitat loss.</p>	<p>LSEs upon estuarine habitats as a result of polluting events upstream of the SAC and as a result of construction and operational phases cannot be excluded without further analysis including of the extent of predicted plumes and their concentration of suspended sediments or polluting substances.</p>
Baldoyle Bay SPA (004016)	<p>Marine outfall pipeline will be installed in a tunnel that passes below the SPA.</p> <p>Possible deterioration of water quality of habitats due to pollution events or elevated suspended solids during construction upstream of this site.</p> <p>Possible deterioration of water quality of habitats due to pollution events or suspended sediment plumes during construction including dredging, bentonite blowout or surface venting.</p> <p>Possible deterioration of water quality of habitats due to plume arising from operation of project.</p> <p>Possible disturbance or displacement of SCI species inside and outside the SPA as a result of noise or visual stimuli.</p> <p>There is the potential for bentonite release or surface venting during the tunnelling operations that could lead to habitat loss outside the SPA at tunnelling compounds.</p>	<p>LSEs upon habitats as a result of polluting events upstream of the SAC and as a result of construction and operational phases cannot be excluded without further analysis including of the extent of predicted plumes and their concentration of suspended sediments or polluting substances.</p> <p>LSEs upon SCI species as a result of noise, vibration and visual disturbance within and in proximity to the SPA boundary cannot be excluded without further analysis.</p> <p>LSEs upon SCI species as a result of habitat loss beyond the SPA boundary cannot be excluded without further analysis.</p>
Rockabill to Dalkey Island SAC (003000)	<p>A 1,300m section of the marine outfall and diffuser are located in this SAC.</p> <p>Possible deterioration of water quality of reef habitats due to pollution events or elevated suspended solids during</p>	<p>LSEs upon reef habitats as a result of polluting events, plumes at construction or operational phase cannot be excluded without further</p>

	<p>dredging, cable protection works, interface works.</p> <p>Possible deterioration of water quality for reef habitats due to treated wastewater discharge during operation.</p> <p>Possible noise disturbance of mobile cetacean species during construction of outfall, cable protection works, interface works.</p> <p>Possible deterioration of water quality leading to reduction in prey of mobile cetacean species during operation.</p> <p>Habitat Loss associated with marine outfall and diffuser.</p>	<p>analysis of the extent of predicted plumes and their concentration of suspended sediments or polluting substances.</p> <p>LSEs upon Harbour porpoise as a result of underwater noise, disturbance and habitat loss cannot be excluded without further analysis.</p>
Ireland's Eye SPA (004117)	<p>Possible deterioration of water quality from construction and operational sediment/pollution plumes resulting in change in foraging potential.</p> <p>Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities.</p>	<p>LSEs upon SCI species as a result of: airborne noise and visual disturbance; upon water quality in the SPA as a result of plumes at construction or operational phase, or; as a result of habitat loss outside the SPA boundary cannot be excluded without further analysis.</p>
North Dublin Bay SAC (000206)	<p>Possible deterioration of water quality of estuarine habitats from construction due to pollution or suspended sediments.</p> <p>Possible deterioration of water quality of estuarine habitats due to plume arising from operation of project.</p>	<p>LSEs upon estuarine habitats as a result of polluting events during construction cannot be excluded without further analysis.</p> <p>LSEs upon estuarine habitats as a result of plumes at construction or operational phase cannot be excluded without further analysis.</p>
North Bull Island SPA (004006)	<p>Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities.</p> <p>Possible deterioration of water quality in the SPA from construction and operational sediment/pollution plumes resulting in change in foraging potential.</p>	<p>LSEs upon SCI species as a result of noise and visual disturbance cannot be excluded without further analysis.</p> <p>LSEs upon SCI species as a result of suspended sediments plumes at construction or operational phase, or; as a result of habitat loss outside the SPA boundary cannot be excluded without further analysis.</p>
Malahide Estuary SPA (004025)	<p>Possible deterioration of water quality of habitats from construction due to pollution or suspended sediments.</p> <p>Possible deterioration of water quality due to plume arising from operation of project.</p> <p>Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities.</p>	<p>LSEs upon SCI species as a result of noise and visual disturbance cannot be excluded without further analysis.</p> <p>LSEs upon water quality in the SPA as a result of plumes at construction or operational phase, or; as a result of habitat loss outside the SPA boundary cannot be excluded without further analysis.</p>

Malahide Estuary SAC (000205)	Possible deterioration of water quality of estuarine habitats from construction due to pollution or suspended sediments. Possible deterioration of water quality of estuarine habitats due to plume arising from operation of project.	LSEs upon estuarine habitats as a result of plumes at construction or operational phase cannot be excluded without further analysis.
Howth Head Coast SPA (004113)	Possible deterioration of water quality from construction and operational sediment/pollution plumes resulting in change in foraging potential. Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities.	LSEs upon SCI species as a result of noise and visual disturbance cannot be excluded without further analysis. LSEs upon water quality in the SPA as a result of plumes at construction or operational phase, or; as a result of habitat loss outside the SPA boundary cannot be excluded without further analysis.
South Dublin Bay and River Tolka Estuary SPA (004024)	Possible deterioration of water quality of habitats from construction due to pollution or suspended sediments. Possible deterioration of water quality of habitats due to plume arising from operation of project. Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities.	LSEs upon SCI species as a result of noise and visual disturbance cannot be excluded without further analysis. LSEs upon water quality in the SPA as a result of plumes at construction or operational phase, or; as a result of habitat loss outside the SPA boundary cannot be excluded without further analysis.
Rogerstown Estuary SAC (000208)	Possible deterioration of water quality of habitats from construction due to pollution or suspended sediments. Possible deterioration of water quality of habitats due to plume arising from operation of project.	LSEs upon estuarine habitats as a result of plumes at construction or operational phase cannot be excluded without further analysis.
Rogerstown Estuary SPA (004015)	Possible deterioration of water quality of habitats from construction due to pollution or suspended sediments. Possible deterioration of water quality of habitats due to plume arising from operation of project. Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities	LSEs upon SCI species as a result of noise and visual disturbance cannot be excluded without further analysis. LSEs upon water quality in the SPA as a result of plumes at construction or operational phase, or; as a result of habitat loss outside the SPA boundary cannot be excluded without further analysis.
South Dublin Bay SAC (000210)	Possible deterioration of water quality of habitats from construction due to pollution or suspended sediments. Possible deterioration of water quality of habitats due to plume arising from operation of project.	LSEs upon estuarine habitats as a result of plumes at construction or operational phase cannot be excluded without further analysis.
Lambay Island SAC (000204)	Possible disturbance of SCI species during construction.	LSEs upon SCI species as a result of underwater noise and disturbance cannot be

	Possible deterioration of water quality leading to reduction in prey during construction and operation.	excluded without further analysis and the application of mitigation as necessary.
Lambay Island SPA (004069)	Possible deterioration of water quality of habitats from construction due to pollution or suspended sediments. Possible deterioration of water quality of habitats due to plume arising from operation of project. Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities	LSEs upon SCI species as a result of noise and visual disturbance cannot be excluded without further analysis. LSEs upon water quality in the SPA as a result of plumes at construction or operational phase, or; as a result of habitat loss outside the SPA boundary cannot be excluded without further analysis.
Dalkey Islands SPA (004172)	Possible deterioration of water quality of habitats from construction due to pollution or suspended sediments or due to plume arising from operation of project. Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities	LSEs upon SCI species as a result of noise and visual disturbance cannot be excluded without further analysis. LSEs upon water quality in the SPA as a result of plumes at construction or operational phase, or; as a result of habitat loss outside the SPA boundary cannot be excluded without further analysis.
Skerries Islands SPA (004122)	Possible deterioration of water quality of habitats from construction due to pollution or suspended sediments or due to plume arising from operation of project. Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities	LSEs upon SCI species as a result of noise and visual disturbance cannot be excluded without further analysis. LSEs upon water quality in the SPA as a result of plumes at construction or operational phase, or; as a result of habitat loss outside the SPA boundary cannot be excluded without further analysis.
Rockabill SPA (004014)	Possible deterioration of water quality of habitats from construction due to pollution or suspended sediments or due to plume arising from operation of project. Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities	LSEs upon SCI species as a result of noise and visual disturbance cannot be excluded without further analysis. LSEs upon water quality in the SPA as a result of plumes at construction or operational phase, or; as a result of habitat loss outside the SPA boundary cannot be excluded without further analysis.
Codling Fault Zone SAC (003015)	Possible underwater noise and disturbance, habitat loss and deterioration in water quality and consequent reduction in prey.	LSEs upon Harbour porpoise as a result of underwater noise, disturbance and habitat loss cannot be excluded without further analysis.

**Step 4 Conclude if the proposed development could result in likely significant effects on a European site**

Based on the information provided in the screening report, site visit, review of the conservation objectives and supporting documents, I consider that in the absence of mitigation measures beyond best practice construction methods, the proposed development has the potential to result in significant effects on North-West Irish Sea candidate SPA (004236), Baldoyle Bay SAC (000199), Baldoyle Bay SPA (004016), Rockabill to Dalkey Island SAC (003000), Ireland's Eye SPA (004117), North Dublin Bay SAC (000206), North Bull Island SPA (004006), Malahide Estuary SPA (004025), Malahide Estuary SAC (000205) Howth Head Coast SPA (004113), South Dublin Bay and River Tolka Estuary SPA (004024), Rogerstown Estuary SAC (000208), Rogerstown Estuary SPA (004015), South Dublin Bay SAC (000210), Lambay Island SAC (000204), Lambay Island SPA (004069), Dalkey Islands SPA (004172), Skerries Islands SPA (004122), Rockabill SPA (004014) and Codling Fault Zone SAC (003015).

The applicant screened in 19 of the above 20 sites, the exception being Codling Fault Zone SAC, which I have screened in following the inclusion of Harbour Porpoise as a qualifying interest (QI) in January 2025, and the potential for LSE's.

Together with the inclusion of Codling Fault Zone SAC, I concur with the applicants' findings that the proposed project has the potential to give rise to significant effects on the qualifying interests of these sites. In my opinion, such impacts could be significant in terms of the stated conservation objectives of the SACs and SPAs when considered on their own and in combination with other projects and plans in relation to potential pollution related pressures, disturbance on qualifying interest habitats and species, habitat loss/degradation and ex-situ impacts.

**Screening Determination: Finding of Likely Significant Effects**

In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of objective information provided by the applicant, I conclude that the proposed development could result in significant effects of the following 20 no. Natura 2000 sites in view of their conservation objectives of a number of qualifying interest features of those sites:

- North-West Irish Sea candidate SPA (004236)
- Baldoyle Bay SAC (000199)
- Baldoyle Bay SPA (004016)
- Rockabill to Dalkey Island SAC (003000)
- Ireland's Eye SPA (004117)
- North Dublin Bay SAC (000206)
- North Bull Island SPA (004006)
- Malahide Estuary SPA (004025)
- Malahide Estuary SAC (000205)
- Howth Head Coast SPA (004113)
- South Dublin Bay and River Tolka Estuary SPA (004024)
- Rogerstown Estuary SAC (000208)
- Rogerstown Estuary SPA (004015)
- South Dublin Bay SAC (000210)
- Lambay Island SAC (000204)
- Lambay Island SPA (004069)
- Dalkey Islands SPA (004172)
- Skerries Islands SPA (004122)

- Rockabill SPA (004014)
- Codling Fault Zone SAC (003015)

It is therefore determined that Appropriate Assessment (stage 2) under Section 177V of the Planning and Development Act 2000 is required on the basis of the effects of the project 'alone'.

## **Appendix 2**

### **Appropriate Assessment**

## Appropriate Assessment

The requirements of Article 6(3) of the Habitats Directive as related to appropriate assessment of a project under part XAB, sections 177V of the Planning and Development Act 2000 (as amended) are considered fully in this section.

Taking account of the preceding screening determination, the following is an appropriate assessment of the implications of the proposed development of the Greater Dublin Drainage Project in view of the relevant conservation objectives of North-West Irish Sea candidate SPA (004236), Baldoyle Bay SAC (000199), Baldoyle Bay SPA (004016), Rockabill to Dalkey Island SAC (003000), Ireland's Eye SPA (004117), North Dublin Bay SAC (000206), North Bull Island SPA (004006), Malahide Estuary SPA (004025), Malahide Estuary SAC (000205), Howth Head Coast SPA (004113), South Dublin Bay and River Tolka Estuary SPA (004024), Rogerstown Estuary SAC (000208), Rogerstown Estuary SPA (004015), South Dublin Bay SAC (000210), Lambay Island SAC (000204), Lambay Island SPA (004069), Dalkey Islands SPA (004172), Skerries Islands SPA (004122), Rockabill SPA (004014) and Codling Fault SAC (003015) based on scientific information provided by the applicant and considering expert opinion set out in observations and experts on behalf of An Bord Pleanála on nature conservation. The information relied upon includes the following:

- Revised Natura Impact Statement, Oct. 2023, prepared by RPS
- RPS Ornithology Reports (2018 and 2023)
- Benthic Solutions Ltd - Reef Assessment Reports (2015 and 2023)
- IWDG Report on Marine Mammals
- Quiet Oceans - Underwater Noise Modelling Report
- RPS Revised Vessel Management Plan
- Site-Specific Detailed Conservation Objectives and associated NPWS data
- Specialist report No. 1 prepared by Emmet Smyth, Inspectorate Scientist,
- Specialist report No. 2 prepared by Dr. Antony Knights, Consultant Marine Ecologist,
- Specialist report No. 3 prepared by Conor Donnolly, Inspectorate Marine Ecologist,

I am satisfied that the information provided is adequate to allow for Appropriate Assessment.

## SUBMISSIONS/OBSERVATIONS

As a revised NIS was submitted by the applicant with the further information, assessment of issues are confined to issues raised in submissions/observations in 2022 and 2024. Submissions received prior to 2022 were considered in section 10 of the Inspector's Report ABP-301908 and the NIS submitted with the application in 2018. I have considered the issues raised in the submissions on ABP-301908 and their subsequent consideration in the appropriate assessment carried out by the Inspector in her report ABP-301908. I am satisfied that the AA/NIS issues which arose in the ABP-301908 were comprehensively assessed by the reporting Inspector in her report APB-301908.

### Department of Housing, Heritage and Local Government-DAU

- The project will now also be within the North-west Irish Sea cSPA (site code 004236)

### Meath County Council

- In-combination assessment NIS; ABP 319422 (400kV electrical cable) has not been included in the revised NIS

### Third Parties:



- NIS/AA Screening: no scientific reasoning was given for screening out Howth Head SAC, Howth Head Coast SPA. Disagree with screening out of Ireland's Eye SAC.
- Lack of consideration given to in-combination impact of other projects.
- Findings of the assessment are not complete, precise and definitive.
- Data, modelling and surveys are out of date.
- Impact on harbour porpoise/ceteceans.
- Impact on shellfish and designated shellfish waters.
- Revised NIS contains contradictory statements.
- Impacts cannot be entirely mitigated.
- NIS did not fully assess waterbirds for Baldoyle Bay SPA.
- Inadequate NIS relating to seals.
- Built-in expansion of WWTP should be considered in the AA.
- Bentonite breakout risk: mitigation measures in the NIS are remediation measures triggering IROPI; there are alternatives.
- Impact on Light bellied brent geese.
- Impact of Intel discharges on the Baldoyle SAC and Rockabill SAC.
- No management plans for Ireland Eye SAC & SPA, Baldoyle SAC & SPA, Rockabill to Dalkey SAC and others.

#### **NORTH-WEST IRISH SEA CANDIDATE SPA (004236)**

(Marine outfall passes through this SPA)

#### **Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Hydrological (water quality and habitat deterioration)
- (ii) Airborne noise / disturbance
- (iii) Habitat loss

See Table 4.3 of the Revised NIS and AA Screening matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	At risk and mitigation required?
Red-throated Diver	Maintain favourable conservation condition. - Non-breeding population size: no significant decline;	Revised NIS section 6.1.2.3, 6.2.4.2, 6.4.4	None required beyond implementation of the CEMP and SWMP.
Great Northern Diver	- Spatial distribution - Sufficient number of locations, area, and availability; - Forage spatial distribution, extent and abundance - Sufficient number of locations, area, and availability; - Disturbance - intensity, frequency, timing and duration not to significantly impact; - Barriers to connectivity and site use - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.	<u>Noise &amp; disturbance:</u> vessels involved in constructing the outfall pipeline in the SPA will contribute to the potential for disturbance of birds on the water, in addition to visual disturbance.  Due to: substantial alternative habitat beyond the zone of influence which birds can utilise during construction any displacement effects will be short term, localised and	
Fulmar	Restore favourable conservation condition. - Population size – stable or increasing; - Spatial distribution - Sufficient number of locations, area, and availability;		

	<ul style="list-style-type: none"> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>	reversible. It is not predicted that there will be any significant impacts to the prey species of the SCIs of the SPA due to the sediment plume produced by dredging activity. Modelling of the operational discharge shows that the discharge from the marine diffuser will disperse and dissipate over a large area. On this basis, there will be no impact on the prey species of the SPA SCIs through this impact pathway. No barriers to connectivity shall be installed which could impact non-breeding, breeding and populations' access to the SPA or other ecologically important sites. No loss of habitat expecting from pipe laying works.	
Manx Shearwater	<p>Maintain favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size – no significant decline;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability;</li> <li>- Forage spatial distribution, extent and abundance - Sufficient number of locations, area, and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity and site use - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>		
Cormorant	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size – stable or increasing;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability;</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>		
Shag	<ul style="list-style-type: none"> <li>- Breeding population size – stable or increasing;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability;</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>	<p><u>Water quality and habitat deterioration</u> during construction: pollution incidents and elevated suspended sediments arising from dredging or piling plume originating from the outfall pipeline corridor. During operation, the operational plume could also result water quality and habitat deterioration.</p> <p><u>Habitat loss:</u> Seabed habitat disturbance occurs entirely within the SPA. The habitat loss impact pathway</p>	
Common Scoter;	<p>Maintain favourable conservation conditions</p> <ul style="list-style-type: none"> <li>- Non-breeding population size – no significant decline;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability;</li> <li>- Forage spatial distribution, extent and abundance - Sufficient number of locations, area, and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> </ul>		
Little Gull	<ul style="list-style-type: none"> <li>- Non-breeding population size – no significant decline;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability;</li> <li>- Forage spatial distribution, extent and abundance - Sufficient number of locations, area, and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> </ul>		There were no observations for little gull recorded during any of the surveys undertaken between 2018 and 2023.

	- Barriers to connectivity and site use - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.	could result in a temporary redistribution of a small number of birds of the North-West Irish Sea cSPA to elsewhere within the site.	No mitigation necessary.
Black-headed Gull;			None required beyond implementation of the CEMP and SWMP.
Common Gull;			
Lesser Black-backed Gull;	<p>Maintain favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size – no significant decline;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability;</li> <li>- Forage spatial distribution, extent and abundance - Sufficient number of locations, area, and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity and site use - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>	<p>No barriers to connectivity shall be installed which could impact non-breeding, breeding and populations' access to the SPA or other ecologically important sites. No loss of habitat expecting from pipe laying works.</p>	
Herring Gull;	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Population size – stable or increasing;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability;</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>		
Great Black-backed Gull;	<p>Maintain favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Non-breeding population size – no significant decline;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability;</li> <li>- Forage spatial distribution, extent and abundance - Sufficient number of locations, area, and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity and site use - number, location, shape and area of</li> </ul>		

	barriers do not significantly impact access to site or other sites outside the SPA.		
Kittiwake;	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Population size – stable or increasing;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability;</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>		
Puffin	<p>Restore favourable conservation conditions</p> <ul style="list-style-type: none"> <li>- Breeding population size – stable or increasing;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability;</li> <li>- Forage spatial distribution, extent and abundance - Sufficient number of locations, area, and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity and site use - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>		
Roseate Tern;	Maintain favourable conservation condition.		
Common Tern;	- Breeding population size – no significant decline;		
Arctic Tern;	- Spatial distribution - Sufficient number of locations, area, and availability;		
Little Tern;	<ul style="list-style-type: none"> <li>- Forage spatial distribution, extent and abundance - Sufficient number of locations, area, and availability;</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity and site use - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>		There were no observations for little tern recorded during any of the surveys undertaken between 2018 & 2023. At a population level, the SPA Little tern population will

			not be affected. No mitigation required.
Guillemot; Razorbill;	<p>Maintain favourable conservation conditions</p> <ul style="list-style-type: none"> <li>- Population size – no significant decline;</li> <li>- Spatial distribution - Sufficient number of locations, area, and availability of suitable habitat;</li> <li>- Forage spatial distribution, extent and abundance and availability - Sufficient number of locations, area, and available biomass.</li> <li>- Disturbance - intensity, frequency, timing and duration not to significantly impact;</li> <li>- Barriers to connectivity and site use - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>	<p>Revised NIS section 6.1.2.3, 6.2.4.2, 6.4.4 These were the most frequently recorded birds on the sea during the time of the year where vessels are likely to be active in the outfall pipeline corridor and marine diffuser (April to October).</p> <p><u>Noise &amp; disturbance:</u> potential LSEs as above. Usage of the subsea habitat in the vicinity of the proposed GDD project regularly by razorbill and guillemot means that disturbance and displacement will occur from waters in the vicinity of the outfall pipeline corridor and marine diffuser during construction. The SPA Guillemot and Razorbill population will not be susceptible to significant visual vessel disturbance impacts except for the July to mid-August period, when they leave the breeding colony on Ireland's Eye.</p> <p><u>Water quality and habitat deterioration</u> as above.</p> <p><u>Habitat loss:</u> as above.</p>	<p>During April to October when vessels will be active, mitigation is required, see Section 7.2 of the revised NIS. Also Vessel Management Plan (appendix F) (assessed below)</p>
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p><b>Assessment of issues that could give rise to adverse effects:</b></p>			

**(i) Hydrological impact (water quality and habitat deterioration) during construction and operation**

The prey species of the SCI species of the North-West Irish Sea cSPA are highly mobile and the birds follow their prey. Even with the temporary low level elevated levels of suspended sediments arising, there will be no reduction in prey species across the expanse of marine waters in the wider area. Sufficient locations, areas, and availability of suitable habitats to support the population and the foraging biomass it requires across the site shall remain intact and unaffected. On this basis, it is not predicted that there will be any significant impacts to the prey species of the SCIs of the North-West Irish Sea cSPA due to the sediment plume produced by dredging activity. The modelling of the operational discharge shows that the discharge from the marine diffuser will disperse and dissipate over a large area. On this basis, there will be no impact on the prey species of the North-West Irish Sea cSPA SCIs through this impact pathway.

**Mitigation measures:** None required beyond implementation of the CEMP and SWMP

**(ii) Airborne noise / disturbance during operation**

Ireland's Eye hosts breeding auk species, namely guillemot and razorbill, see 5.1.3 of Revised NIS. Guillemot and razorbill may be impacted by significant visual vessel disturbance impacts for the July to mid-August period. During this time, mitigation is required.

Disturbance and displacement of SPA species could occur from waters in the vicinity of the microtunnelling/subsea interface and fibre optic cable crossing during piling. This will occur on a short term (two weeks), localised (within 100m of each location, occurring sequentially) and reversible basis. The total area of subtidal habitat potentially affected is approximately 3 hectares. Any disturbance/ displacement effects that do occur will be on a short term, localised and reversible basis. For any birds that are displaced, the high local availability of adjacent marine habitat within the marine waters of the SPA means there is likely to be substantial alternative habitat beyond the zone of influence of the project which birds can continue to utilise throughout construction. Temporary effects of construction capable of resulting in disturbance impacts are not significant at a population level. The intensity, frequency, timing and duration of disturbance across the site shall not occur at levels that significantly impact the achievement of targets for population size and spatial distribution. No permanent barriers to connectivity shall be installed as part of the Proposed Project at operational phase. No temporary barriers which could impact the breeding, non-breeding and populations' access to the SPA or other ecologically important sites outside the SPA will occur at construction phase.

**Mitigation measures**

Section 7.2 of the Revised NIS relates. A Vessel Management Plan (see Appendix F of the revised NIS) is proposed, a purpose of which is to ensure the protection of guillemot and razorbill when they are leaving the Ireland's Eye colony in July to mid-August at the end of the breeding season. The bird observer appointed by the contractor as part of the Vessel Management Plan, will notify the Marine Coordinator if there are any additional agglomerations of SCI species during their watching brief in place over the period of July to August in any given year during the construction period and will advise if boats are to leave the area as soon as it is safe to do so. Implementation of the CEMP and SWMP.

**(iii) Habitat loss**

Disturbance to the marine benthos and the sand dwelling shellfish along the marine pipeline corridor are expected to be high, although this will be limited to a relatively small area directly relating to the trenched route (approximately 0.16km<sup>2</sup>), or neighbouring sediments (approximately 1km<sup>2</sup>) affected by localised smothering of stored or plume-dispersed material, comprising only 0.04% of the marine area of the SPA.

The physical recovery of the surface sediments along the proposed outfall pipeline route (marine section) is expected to show recovery within a few months, with a recolonisation by the benthos to occur within six months for the majority of species, but possibly one to two years for some of the larger slower-growing taxa.

The placement of the pipeline on the seabed in a trench that will be backfilled will result in no loss of habitat available to the SCI species of the North-West Irish Sea cSPA because the birds use the surface waters of the SPA and not the seabed. The temporary effect of dredging a trench will have no bearing on the SCI species (aside from the potential for disturbance, discussed above) as this does not result in loss of habitat.

Construction activities will result in highly localised, temporary and reversible effects, these activities will not compromise the maintenance or enhancement of the range of marine habitats utilised by the qualifying species of the North-West Irish Sea cSPA.

No permanent barriers to connectivity shall be installed as part of the Proposed Project at operational phase. No temporary barriers which could impact the breeding and non-breeding populations' access to the SPA or other ecologically important sites outside the SPA will occur at construction phase.

**Mitigation measures:** None required beyond implementation of the CEMP and SWMP.

**Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the North-West Irish Sea cSPA. Direct and indirect impacts would be temporary in nature and mitigation measures are described to mitigate impact (loss and/or disturbance) on bird species Guillemot and Razorbill in the form of a Vessel Management Plan and the CEMP. Any hydrological and habitat loss impacts can be mitigated by implementation of the CEMP and SWMP. I am satisfied that the mitigation measure proposed to prevent such effects have been assessed as effective and can be implemented and conditioned if permission is granted.

**Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

**Site Integrity**

The proposed development will not affect the attainment conservation objectives of the North-West Irish Sea cSPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

**Baldoyle Bay SAC (000199):**

(Marine outfall passes through this SAC)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Water quality and habitat deterioration (construction and operation)
- (ii) Underwater noise / disturbance
- (iii) Habitat loss

See Table 4.3 of the Revised NIS and AA Screening matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Mudflats and sandflats not covered by seawater at low tide;	<p>To maintain the favourable conservation condition.</p> <p>Habitat area - is stable or increasing.</p> <p>Distribution – conserve in neutral condition</p>	<p>See section 6.2.1, 6.3.1, 6.4.1 of revised NIS.</p> <p><u>Water quality and habitat deterioration</u></p> <ul style="list-style-type: none"> <li>- From pollution incidents &amp; elevated suspended sediments upstream activities: limited to indirect impacts from the tunnelling compounds or construction works upstream;</li> <li>- The pathway of possible discharges would be directly over this qualifying interest;</li> <li>- As the nature and scale of possible contamination to the site from upstream activities is deemed to be rare, minor and very short lived, it is concluded that the resilience of the receiving habitat is such that that this potential would have a negligible impact within the designated site.</li> <li>- From suspended sediment arising from dredging or piling plume: Results indicate that the plume during the dredging and piling does not impact on the Baldoyle Bay SAC.</li> <li>- From bentonite release: Impacts are likely to be minimal as water depth is extremely shallow and natural suspended sediment very fine.</li> </ul>	<p>See Table 7.1 of Revised NIS</p> <p>Yes, mitigation applied within the CEMP to trap or isolate discharges where they are likely to occur.</p> <p>Use of bentonite is outlined in the CEMP (Volume 2, Part B Appendices). Use will be monitored.</p>



		<ul style="list-style-type: none"> <li>- From surface venting: unlikely event; this can create a small area of physical impact to the SAC and qualifying in the form of a small pock mark or shallow crater. This may have a very localised impact on the sediments, particularly where there is limited cohesion. No net loss in habitat or impact on integrity of QI.</li> <li>- From discharge plume – operational stage. Modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will not impact Baldoyle Bay SAC.</li> </ul> <p><u>Underwater noise / disturbance</u> The SCIs listed within the SAC are susceptible to impact from low level ground noise (or in this case vibration) from micro-tunnelling. The expected level of vibration will be insufficient to create instability.</p> <p><u>Habitat loss</u>; arising from bentonite release and surface venting in the designated habitat of mudflats and sandflats not covered by seawater at low tide will result in a temporary localised area of pollution that will subsequently be broken down and dispersed by the prevailing tidal flow within or outside the estuary. In this area there will be no habitat loss encountered within the SAC.</p> <p>A small and temporary impact would be expected from surface venting by surface depression of 1-3msq but would naturally infill on tidal cycle. No net habitat loss or integrity impact.</p>	
Salicornia and other annuals colonizing mud and sand;	To maintain the favourable conservation condition. - Habitat area: is stable or increasing.	<u>Water quality and habitat deterioration</u> <ul style="list-style-type: none"> <li>- from pollution incidents &amp; elevated suspended sediments upstream</li> </ul>	See Table 7.1 of Revised NIS  Yes, mitigation applied within

	<ul style="list-style-type: none"> <li>- Distribution: no decline or change.</li> <li>- Physical structure: sediment supply: maintain natural circulation of sediments and organic matter.</li> <li>- Physical Structure: creeks and pans - maintain structure.</li> <li>- Physical structure: flooding regime - maintain tidal regime.</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation structure: vegetation height – maintain variation.</li> <li>- Vegetation structure: vegetation cover – maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: species and sub-communities – maintain presence of species-poor communities.</li> <li>- Vegetation structure: negative indicator species- No significant expansion of common cordgrass.</li> </ul>	<p>activities: limited to indirect impacts from the tunnelling compounds or construction works upstream.</p> <ul style="list-style-type: none"> <li>- the event that a small pollution event does occur, the likely route for this material into the estuary would be the existing eroded riverine flow channels within the estuary which remain away from the main saltmarsh areas.</li> <li>- The main saltmarsh is largely unaffected by the water quality during the majority of the tidal cycle and from riverine inputs for significant period of time. When a spring high water event occurs, the overall volume of Baldoyle Bay increases increasing the dilution effect of any pollutant within the estuary during this period.</li> <li>- From suspended sediment arising from dredging or piling plume: Results indicate that the plume during the dredging and piling does not impact on the Baldoyle Bay SAC.</li> </ul>	<p>the CEMP to trap or isolate discharges where they are likely to occur.</p> <p>Use of bentonite will be monitored, see CEMP (Volume 2, Part B Appendices).</p> <p>Implementation of maintenance programme.</p>
Atlantic salt meadows	<p>Maintain the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Habitat area: is stable or increasing.</li> <li>- Distribution: no decline or change.</li> <li>- Physical structure: sediment supply: maintain natural circulation of sediments and organic matter.</li> <li>- Physical Structure: creeks and pans: maintain/restore structure.</li> <li>- Physical structure: flooding regime: maintain tidal regime.</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation structure: vegetation height: maintain variation.</li> <li>- Vegetation structure: vegetation cover :</li> </ul>	<ul style="list-style-type: none"> <li>- From bentonite release: Exposure risk to these QI is very small and likely to be very localised (1-2m radius) but may remain in a localised areas where the tidal waters do not reach. In this instance, the site may require intervention to mitigate on any lasting impacts through smothering. This may involve partial recovery of bentonite or enhanced dispersion through washing the bentonite clear of the vegetation, subject to the size of the breakout.</li> <li>- From surface venting: unlikely event, this can create a small area of physical impact to the SAC in the form of a small pock mark or shallow crater. Unlikely in saltmarsh vegetation area; no net loss</li> </ul>	

	<p>maintain +90% of area outside creeks vegetated.</p> <ul style="list-style-type: none"> <li>- Vegetation composition: species and sub-communities: maintain range of subcommunities.</li> <li>- Vegetation structure: negative indicator species - no significant expansion of common cordgrass.</li> </ul>	<p>in habitat or impact on the integrity of any of the qualifying habitats.</p> <ul style="list-style-type: none"> <li>- Discharge Plume – as above</li> </ul> <p><u>Underwater noise / disturbance</u></p> <ul style="list-style-type: none"> <li>- as above.</li> </ul> <p><u>Habitat loss</u>; arising from bentonite release, see above. From surface venting. In this area there will be no habitat loss encountered within the SAC.</p>	
Mediterranean salt meadows	<p>Maintain the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Habitat area: is stable or increasing.</li> <li>- Distribution: no decline or change.</li> <li>- Physical structure: sediment supply: maintain natural circulation of sediments and organic matter.</li> <li>- Physical structure: creeks and pans: maintain structure.</li> <li>- Physical structure: flooding regime: maintain tidal regime.</li> <li>- Vegetation structure: zonation: maintain range of habitats.</li> <li>- Vegetation structure: vegetation height: maintain variation.</li> <li>- Vegetation structure: vegetation cover: maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: typical species: maintain range of sub-communities.</li> <li>- Vegetation structure: negative indicator species - no significant expansion of common cordgrass.</li> </ul>		
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p><b>Assessment of issues that could give rise to adverse effects:</b></p> <p><b>(i) Hydrological impact (water quality and habitat deterioration) during construction and operation</b></p> <p>Water quality and habitat deterioration from pollution incidents &amp; elevated suspended sediments upstream activities are limited to indirect impacts from the tunnelling</p>			

compounds or construction works upstream. A further risk arises from the location of compound 10 within a high risk flood area. If a small pollution event does occur, the likely route for this material into the estuary would be the existing eroded riverine flow channels within the estuary but away from the main **saltmarsh areas**.

Regarding the **mudflats and sand flats** not covered by seawater at low tide in the event of a high sediment load or pollution incident associated with upstream works or operational failures it is noted that the discharge would be directly over this qualifying interest as this habitat is found throughout the bay including at Velvet Strand. The revised NIS refers to the conservation objectives supporting document for this SAC. The document acknowledges that episodic activities may occur but due to habitat resilience the habitat may be expected to recover within a reasonable timeframe from possible contamination. The qualifying interest and community type will not be impacted by any likely pollution events according to the document. Having regard to this documentation supporting the SAC conservation objectives, I agree with the position set out in the revised NIS that any likely pollution events would not undermine the conservation objective for this qualifying interest.

Possible surface venting (air breakouts) due to escape of compressed air used in the tunnel boring could create some temporary minor depression (1 to 3 m<sup>2</sup>) if it occurred in the main part of the estuary or have an imperceptible impact if located in the salt marsh vegetation. I accept the conclusion in the Revised NIS that the natural condition of the qualifying habitats will not be impacted by this unlikely event and that there would be no net loss of habitat or impact on the integrity of the qualifying interests due to this impact pathway.

The presence of bentonite, following a breakout, at the surface can result in increased siltation and the smothering of sediments and organisms & reduced light for photosynthesis. Exposure risk to these QI is very small and likely to be very localised (1-2m radius) but may remain in a localised areas where the tidal waters do not reach.

Regarding the discharge plume in the operational period, details of the effluent discharge qualities predict significant dispersion of the highly treated discharge. The future requirement to operate under EPA licence also refers. I consider that it is demonstrated in the information provided by the applicant that the operational plume will not impact the qualifying interests of this European site.

#### **Mitigation measures:**

With respect to upstream incidents, although the resilience of the receiving habitat is such that that this potential would have a negligible impact within the designated site and noting the natural dilution effect within the estuary the implementation of the CEMP including a Surface Water Management Plan is necessary. Mitigation measures outlined include bunding at microtunnelling compounds adjacent Baldoyle Estuary, selection of piling method to ensure hydraulic sealing of shafts and measures to ensure that all storage of bentonite, solvents and hydrocarbons are above the most extreme flood risk area, if necessary by development of raised areas. I note the proposal to prepare and implement Emergency Response Plans to address spillages. I am satisfied that these measures will be adequate to minimise impacts from any flood event as well as from normal construction activities throughout. Impacts would be highly unlikely to reach the European site.

The saltmarsh habitats are additionally protected due to their elevated position and any polluted waters arriving in the channels would have an effect only if a pollution incident coincided with very high tides. I accept the point made in the Revised NIS that

any such event would be associated with high dilution and pollutants would disperse rapidly. Therefore, the impact from the upstream works and from nearby compounds 9 and 10 to the salt marsh habitats can be expected to be negligible. The conservation objective of maintaining a stable habitat (subject to natural processes) and preventing decline or change in the distribution of the salt marshes will not be undermined. It can be concluded that the conservation objectives for the SCIs of this SAC are not compromised by water quality impact pathway.

With respect to air venting/breakout to surface requires management of pressure during construction and in accordance with the CEMP.

With respect to **bentonite breakout**, the use of bentonite is outlined in the CEMP (see section 4.2 of the CEMP). Bentonite usage will be monitored through materials balance calculations, pressure monitoring in the lines and above ground visual assessment of the works to ensure that should breakout occur the volume is minimised. This will limit the volume of any bentonite losses significantly.

The depth of the micro-tunnelling route beneath the estuary means that the likelihood of a bentonite breakout making it to the surface of the estuary is very low; however, the result of a breakout may result in a small discharge to the surface. If this occurs in the channel or open water environments, then this material will disperse harmlessly. If this occurs within the saltmarsh vegetation, then this material is unlikely to disperse quickly due to the lack of tidal flow in these areas and may require some intervention to recover and disperse to avoid a smothering effect. In this instance, the site may require intervention to mitigate on any lasting impacts through smothering. In the event of bentonite breakout in saltmarsh area, intervention by mechanical recovery or washing the bentonite clear of the vegetation may be required. Implementation of the CEMP which requires a contingency management plan. Monitoring procedures will be in place. If a break out has occurred, the drilling contractor shall cease pumping and implement the processes detailed in their contingency plan. Regulatory agencies shall immediately be notified regarding a suitable course of action.

I accept the conclusions of the revised NIS that through the mitigation activities outlined above the avoidance of a smothering impact can be achieved so as not to impact on the integrity of the saltmarsh and therefore not compromise the conservation objective for these qualifying habitats to maintaining a stable habitat (subject to natural processes) and to prevent decline or change in the distribution of these saltmarsh habitats.

#### **(ii) Underwater noise / disturbance**

None of the four SCIs listed within the SAC are susceptible to impact from low level ground noise (or in this case vibration). The expected level of vibration will be insufficient to create any instability within the saltmarsh.

**Mitigation measures:** None required

#### **(iii) Habitat Loss**

Habitat loss in salt marsh areas arising from bentonite release would be unlikely to disperse naturally or quickly due to the lack of tidal flow in these areas and may require intervention to a smothering effect. Estimated that a release, if it occurs, would impact an area of less than 6msq. Surface mitigation required.

**Mitigation measures:** None required, beyond implementation of the CEMP and SWMP.

**Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Baldoyle Bay SAC. Direct and indirect impacts (pollution effect) would be temporary in nature and mitigation measures are described to mitigate impact on designated habitats in the form of a CEMP including the SWMP. I am satisfied that the mitigation measure proposed to prevent such effects have been assessed as effective and can be implemented and conditioned if permission is granted.

**Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

**Site Integrity**

The proposed development will not affect the attainment conservation objectives of the Baldoyle Bay SAC. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

**Baldoyle Bay SPA (004016):**

(Marine outfall passes through this SPA)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Hydrological (water quality and habitat deterioration)
- (ii) Airborne noise / disturbance
- (iii) Habitat loss

See Table 4.3 of the revised NIS and AA Screening matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Brent Goose	Maintain the favourable conservation condition - Long term population trend stable or increasing. - Distribution - no significant decrease in the range, timing and intensity of use of areas.	Revised NIS section 6.1.1, 6.2.4.1, 6.4.3  <u>Noise &amp; disturbance:</u> Noise impacts will occur within an area of habitat within the Baldoyle Bay SPA due to piling occurring at the western and eastern microtunnelling compounds from a max period of 2 weeks during piling of jacking shaft. Impacted area: 1.79ha + 0.21ha.	Yes, mitigation is required for Brent Geese, Shelduck, Golden plover. See Section 7.1 of the revised NIS.
Shelduck	Maintain the favourable conservation condition		

	<ul style="list-style-type: none"> <li>- Long term population trend stable or increasing.</li> <li>- Distribution - no significant decrease in the range, timing and intensity of use of areas.</li> </ul>	<p>At microtunnelling/subsea interface, It is estimated that the sound power level reaching the Baldoyle Bay SPA boundary will be in the region of 75 dB LAmax and expected to last 4 weeks. Impacted area: 3ha.</p> <p>Visual disturbance resulting from the construction and compounds activities for duration of construction and vessel movement along outfall corridor.</p> <p>Visual disturbance can occur up to a distance of 205m from source for light-bellied brent goose, 500m for shelduck, 200m for golden plover, grey plover and bar-tailed godwit, and 50m for ringed plover.</p> <p><u>Water quality and habitat deterioration</u> pollution or elevated sediments upstream of the SPA, bentonite release, surface venting and suspended sediment arising from dredging or piling plume originating from the outfall pipeline corridor. During operation, the operational plume could also result in LSEs.</p>	
Ringed Plover	<p>Maintain the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Long term population trend stable or increasing.</li> <li>- Distribution - no significant decrease in the range, timing and intensity of use of areas.</li> </ul>		
Golden Plover	<p>Maintain the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Long term population trend stable or increasing.</li> <li>- Distribution - no significant decrease in the range, timing and intensity of use of areas.</li> </ul>		
Grey Plover	<p>Maintain the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Long term population trend stable or increasing.</li> <li>- Distribution - no significant decrease in the range, timing and intensity of use of areas.</li> </ul>	<p><u>Habitat loss:</u> Habitat loss due to the proposed project is confined to the areas outside the Baldoyle Bay SPA, where there is potential for connectivity between the Baldoyle Bay SPA and the surrounding terrestrial habitats at the microtunnelling compounds over the 18month construction period. This loss is reversible.</p>	
Bar-tailed Godwit	<p>Maintain the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Long term population trend stable or increasing.</li> <li>- Distribution - no significant decrease in the range, timing and intensity of use of areas.</li> </ul>		
Wetlands	<p>Maintain the favourable conservation condition of the wetland habitat.</p> <ul style="list-style-type: none"> <li>- The permanent area occupied by the wetland habitat should be stable.</li> </ul>	<p>Airborne noise and visual disturbance:</p> <p>Ca. 2 hectares of wetland habitat within the SPA boundary will be impacted due to piling noise from the eastern microtunnelling compounds. As a worst case scenario, it is</p>	<p>This impact is fully reversible. No adverse effect for the wetland habitat.</p>

		considered that this habitat will be lost to birds for the duration of this activity, which is a maximum time period of two weeks.	
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p><b>Assessment of issues that could give rise to adverse effects:</b></p> <p><b>(i) Airborne noise and visual disturbance</b></p> <p><u>Brent Goose</u></p> <p>I consider that Brent Goose is not likely to be affected by airborne noise in view of the low numbers of the species using the area predicted to be affected, they are generally passing through and significant noise disturbance due to piling is for a short period. However, large numbers of Light-bellied Brent goose use lands within 205m of the compound, which is the zone of visual disturbance for this species. Due to the 18 month construction duration and the numbers involved the targets of the conservation objectives for Light-bellied Brent goose could be compromised as a result of displacement of birds in large numbers and knock-on effects in terms of competition and habitat availability, which could continue into the operation period. Mitigation is required for Brent Geese.</p> <p><u>Shelduck</u></p> <p>Shelduck were recorded only in small numbers in the zone relevant to airborne noise impact pathway and in very low numbers in the subtidal environment. As such it may be concluded that neither the piling at the compounds or the activities in the subsea environment are likely to compromise the targets for this SCI. However due to the presence of Shelduck in large numbers in the 500m visual disturbance zone there is potential for an adverse effect on site integrity for this species. Mitigation is required for Shelduck.</p> <p><u>Ringed Plover</u></p> <p>Ringed Plover were recorded in the surveys as being present in low numbers in the zone of airborne noise and visual disturbance impact. Effects would be restricted to small numbers, would be temporary and reversible. There would not be an adverse effect on site integrity for this species due to airborne noise and visual disturbance.</p> <p><u>Golden Plover</u></p> <p>Golden Plover are occasionally present in large numbers in the zones of impact for airborne noise and visual disturbance and could result in possible significant knock-on effects relating to competition and habitat availability, which could result in birds being lost from Baldoyle Bay SPA resulting in adverse effects on site integrity for this species. Mitigation is required for Golden plover.</p> <p><u>Grey Plover</u></p> <p>Grey Plover and Bar-tailed godwit do not regularly use the habitats within the zones of impact for airborne noise and visual disturbance identified for Baldoyle Bay SPA. The construction and operation of the project will not compromise the targets of the conservation objective for this species and therefore will not cause an adverse effect on site integrity due to airborne noise and visual disturbance.</p> <p>The airborne noise impact pathway of the proposed GDD project during construction and operation could compromise the targets of the conservation objective for Brent Geese, and Shelduck and Golden Plover. Mitigation is required.</p>			



**Mitigation measures:**

See section 7.1 of the revised NIS. A 2.4m high hoarding will be used for the duration of the construction works at both microtunnelling compounds (no. 9 & 10). Compound construction cannot proceed without the installation of hoarding around the entire perimeter of each compound and any associated access track. The deployment of this hoarding will reduce visual disturbance impacts on birds to zero. To avoid disturbance to wintering birds, the hoarding can only be erected and uninstalled between April and August unless supervised by a professional ecologist. I am satisfied that these mitigation measures will reduce any impacts to a very low level and that there would not be an adverse effect on site integrity for this species due to airborne noise and visual disturbance.

**(ii) Hydrological impact (water quality and habitat deterioration)**

Re water quality & habitat deterioration, I note that impacts caused by upstream pollution incidents represent a negligible level of impact on Baldoyle Bay. It is not predicted that there will be any significant impacts arising from plume produced by dredging activity. Assessment of bentonite release and surface venting has concluded that any impacts are likely to be minimal in the overall context of the Baldoyle Bay SPA. It is considered that there will be no effect on the prey species of the SCIs of the Baldoyle Bay SPA by these impact pathways. Modelling of effluent discharge qualities during the operational phase indicate that the plume will be subject to significant dispersion and will not impact SCI species of Baldoyle Bay SPA.

**Mitigation measures:** None required beyond implementation of the CEMP and SWMP.

**(iii) Habitat Loss**

Habitat loss occurs outside this SPA and are confined to compounds and access track. Ringed plover was the only SCI recorded where compounds will be constructed but only recorded once during surveys. Effect would be small, temporary and reversible. I consider there would no adverse effect on Ringed Plover and other SCI species. No adverse effect for the wetland habitat either.

**Mitigation measures:** None required beyond implementation of the CEMP and SWMP.

**In-combination effects**

I am satisfied that in-combination effects have been assessed adequately in the Revised NIS, section 6.5 of the Revised NIS refers. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures that could act in combination with other plans and project to generate significant effects on this SPA in view of the conservation objectives for these designated species and habitat.

**Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Baldoyle Bay SPA. Direct and indirect impacts would be temporary in nature and mitigation measures are described to mitigate impact (airborne noise and visual disturbance) on bird species Brent Goose, Shelduck

and Ringed Plover in the form of hoarding for the duration of the construction works at both microtunnelling compounds (no. 9 & 10), and with respect to potential hydrological impact and habitat loss through implementation of the CEMP and SWMP. I am satisfied that the mitigation measure proposed to disturbance effects have been assessed as effective and can be implemented and conditioned if permission is granted.

#### Reasonable scientific doubt

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

#### Site Integrity

The proposed development will not affect the attainment conservation objectives of the Baldoyle Bay SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

#### Rockabill to Dalkey Island SAC (003000):

(A 1,300m section of the marine outfall and diffuser are located in this SAC)

#### Summary of Key issues that could give rise to adverse effects (from screening stage):

- (i) Hydrological (water quality and habitat deterioration)
- (ii) Underwater noise and disturbance
- (iii) Habitat loss

See Table 4.3 of the Revised NIS and AA Screening matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Reefs	<p>Maintain the favourable conservation condition</p> <p>Habitat area – stable or increasing.</p> <p>Habitat distribution – stable or increasing.</p> <p>Community structure – conserve in natural condition.</p>	<p>Revised NIS section 6.2.2, 6.3.2, 6.4.2</p> <p><u>Water quality and habitat deterioration</u> (construction and operation):</p> <ul style="list-style-type: none"> <li>- From pollution incidents &amp; elevated suspended sediments during construction through increased shoreline activities and increased vessel operations during dredging, piling, stringing and deployment of the outfall pipeline to the seafloor.</li> <li>- A significant increase in suspended sediment over a prolonged period could be damaging. Modelling results of the dredging plume indicate that the resulting suspended sediments has been limited to a northern deposition and generally localised elevation when discharged in a controlled manner. This has resulted in no significant plume being recorded close to the reef related qualifying interest of the</li> </ul>	<p>Yes. Unmanaged, these effects could prevent the maintenance of the favourable conservation condition of the Annex I habitats in the SAC. Mitigation is required. See section 7.4 of the revised NIS.</p>

		<p>SAC recorded around the Ireland's Eye northern and eastern coastlines with small exception to north of island due to flow of flooding tides, however concentration was well below the natural variability of waters surrounding the island. Moderately strong tidal currents experienced in this area are sufficient to prevent the deposition of significant silt material on these reef habitats and thereby prevent a degradation. No adverse effect arising from suspended sediment plume.</p> <ul style="list-style-type: none"> <li>- From discharge plume – operational stage. Modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will have no impact on the conservation objectives of the reefs.</li> </ul> <p><u>Underwater noise and disturbance:</u> there will be no impact on this QI through this impact pathway.</p> <p><u>Habitat loss:</u> The reefs have been surveyed in detail and are not within the area to be impacted by dredging. The route of the pipeline and diffuser does not connect with the reefs or indirectly affect this habitat so as to reduce its area.</p>	
<b>Harbour Porpoise</b>	<p>Maintain the favourable conservation condition</p> <p>Access to suitable habitat – not be restricted by artificial barriers.</p> <p>Disturbance levels by human activity should not adversely affect.</p>	<p>Revised NIS section 6.2.2, 6.3.2, 6.4.2</p> <p>The effect on harbour porpoise due to <u>water quality and habitat deterioration</u> impacts could occur due to the plume from dredging. This is predicted to result in elevated suspended sediment above 5mg/l over 4.5 km<sup>2</sup> (1.5 km<sup>2</sup> is within SAC). This is 0.55% of the total SAC and the duration of dredging is expected to be 60 days. The plume would have a localised temporary impact on the foraging behaviour of the harbour porpoise due to reduced visibility in the vicinity of the dredging. The species has a large foraging range and in addition is not averse to inhabiting high turbidity waters.</p> <p>From <b>discharge plume – operational stage</b>. The concentration of suspended sediments is predicted during the operational phase is to be below that detectable by this Annex II species and</p>	<p>Yes, mitigation required, see section 7.4 of the revised NIS</p>

		<p>no impact to this qualifying species is expected.</p> <p><u>Underwater noise and disturbance-</u>expected noise levels due to dredging will not be sufficient to cause any damage but is likely to induce avoidance behaviour prior to entering the area of the discharge plume. The noise created by the piling was higher and above the temporal threshold shift (TTS) for the harbour porpoise when in close proximity to the source.</p> <p>Any disruption to benthos during construction of the outfall pipe will be temporary, save for the diffuser. The diffuser is not expected to create a <u>habitat loss</u> to the harbour porpoise and could create pibenthic faunal assemblages to the site, attracting prey species for the harbour porpoise. During operation, it is expected that the plume will visibly be imperceptible to porpoises within 50-100m of the diffuser; it may enhance plankton productivity which may encourage feeding from prey species in the vicinity, but the impact of this is expected to be negligible.</p>	
--	--	--	--

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.

Assessment of issues that could give rise to adverse effects:

**(i) Water quality and habitat deterioration (construction and operation)**

Reefs:

- A significant increase in suspended sediment over a prolonged period could be damaging. Modelling results of the dredging plume indicate that there will no adverse effect arising from suspended sediment plume. During operation, modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion and will have no impact on the conservation objectives of the reefs.
- There is a risk of a release of pollutants during construction as a result of accidental spillages and site run-off.

Harbour Purpose:

The effect on harbour porpoise due to water quality and habitat deterioration impacts could occur due to the plume from dredging. The plume would have a localised temporary impact on the foraging behaviour of the harbour porpoise due to reduced visibility in the vicinity of the dredging. The species has a large foraging range and in addition is not averse to inhabiting high turbidity waters.

I refer to the Specialist Report No. 3 prepared by Conor Donnolly, Inspectorate Marine Ecologist, attached as Appendix 5 to this Inspector's Report, which states that with regard to pollution incidents, these can be managed through CEMP so risk is low.

Measures in place to prevent adverse effects in the event of a pollution incident. With mitigation measures in place there is no adverse effect on site integrity.

With regard to suspended sediment arising from dredging or piling plume at construction stage: Sediment plumes from the discharge of dredge spoil may present habitat disturbance to cetaceans foraging in the area. Direct impact by the plume will be localised (<0.55% of the SAC), short term (< 60 days) and will not cause deterioration in Harbour Porpoise prey resources. No adverse effect on site integrity. With regard to discharge plume, operational stage: The modelling shows that the discharge from the Marine Diffuser will disperse and dissipate over a large area with a low increase above background turbidity levels. No impact to the Harbour Porpoise QI in view of its Conservation Objectives. No adverse effect on site integrity.

**Mitigation measures:**

Reefs:

- For precautionary purposes, the turbidity will be monitored using a vessel deployed turbidity meter during peak dredging activity and dredging discharges restricted to peak flooding tides if a plume is detected >50mg/l above background on Ireland's Eye northern coastline.
- Pollution risk can be mitigated through the implementation and auditing of the CEMP.

I am satisfied that the management of risks of pollution during construction of the outfall pipeline through the CEMP and other measures will ensure that the likelihood of significant adverse effect on QI reefs can be minimised.

Harbour Porpoise:

During construction, pollution incidents can be managed through CEMP implementation.

**(ii) Underwater noise and disturbance**

Harbour porpoise:

I refer to the attached Inspectorate Marine Ecologist report (Specialist Report no. 3), the Revised NIS considered the impact arising from dredging operations during construction of the marine outfall pipeline and piling operations during construction at the tunnel/dredge interception pit approximately 2.6km west of the SAC and the fibre optic cable crossing point, approximately 120m west of the SAC. The revised NIS states that the overall level of dredging noise is expected to be low but is expected to induce some behavioural responses by Harbour Porpoises when in close proximity (<1km). It describes noise impacts from piling as significantly greater. In both cases it is proposed that these impacts will be addressed by mitigation

Expected noise levels due to dredging and installation of the diffuser will not be sufficient to cause any damage but is likely to induce avoidance behaviour prior to entering the area of the discharge plume. Although the majority of these works are carried out outside the SAC, the impact pathway is open and mitigation methods are required to ensure that effects on this Annex II species do not compromise the conservation objectives for the SAC.

**Mitigation measures:**

Harbour porpoise:

Mitigation is detailed in section 7.4 of the Revised NIS and incorporated as Mitigation No. BM6 in EIAR Vol. 3 Part A, Chapter 24 Summary of Mitigation Measures). This mitigation includes, *inter alia*, the use of marine mammal observers and a high frequency hydrophone system so as to establish an operational safe zone around the site in order to prevent operations starting when sensitive receptors including Harbour

Porpoise are within its perimeter. It also includes a ramp-up procedure for piling activities. These procedures are in adherence with the current NPWS Guidelines (NPWS, 2014<sup>3</sup>). Implementation of the measures will ensure Harbour Porpoise are not in close proximity to the dredging and piling activities.

I am satisfied that these measures are best practice and will be effective and will ensure that there is no risk of direct injury and no significant adverse noise impact to marine mammals including the qualifying interest of this site.

### **(iii) Habitat loss**

#### Reefs:

Habitat loss; no connection to this QI, there will be no habitat loss encountered within the SAC.

#### Harbour porpoise:

I refer to the Inspectorate Marine Ecologist Specialist Report attached: the Revised NIS considered impacts arising during construction and operation. Construction impacts occur along the marine corridor pipeline which extends 1.3km into the SAC and involves works associated with dredging and burial of the pipeline and the installation of the diffuser at the outfall. Operational impacts relate to the presence of the diffuser and discharge from it.

The revised NIS submitted by the applicant concluded that overall, the impact to the foraging area within the SAC will be very small and short-term during construction works (i.e. temporary impact on benthic communities which are expected to recover within <1 year). Following completion, the site will be fully accessible by Harbour Porpoise for foraging, with a possibly slightly enhanced capacity to support small prey species targeted by Harbour Porpoise (due to slightly elevated levels of dissolved inorganic nitrogen (DIN) which may enhance plankton productivity in the area). There will be no impact upon the conservation objectives for this QI through habitat loss.

**Mitigation measures:** none required beyond the treatment of effluent which forms part of the application.

### **In-combination effects**

I am satisfied that in-combination effects have been assessed adequately in the Revised NIS, section 6.5 of the Revised NIS refers. I am satisfied that the applicant has demonstrated that no significant residual effects will remain post the application of mitigation measures that could act in combination with other plans and project to generate significant effects on this SAC in view of the conservation objectives for these QIs.

### **Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Rockabill to Dalkey SAC. Indirect impacts (water quality deterioration and underwater noise disturbance) would be temporary in nature and mitigation measures are described to mitigate impact on reefs and harbour porpoise in the form of a (i) turbidity monitoring and dredging control and (ii) noise

---

<sup>3</sup> NPWS (2014). Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters.

mitigation plan, together with implementation of the CEMP and SWMP. I am satisfied that the mitigation measure proposed to disturbance effects have been assessed as effective and can be implemented and conditioned if permission is granted.

#### Reasonable scientific doubt

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects

#### Site Integrity

The proposed development will not affect the attainment conservation objectives of the Rockabill to Dalkey Island SAC. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

#### Ireland's Eye SPA (004117):

(0.4km southwest of the marine outfall)

#### Summary of Key issues that could give rise to adverse effects (from screening stage):

- (i) Airborne noise / disturbance
- (ii) Hydrological (water quality and habitat deterioration)
- (iii) Habitat loss

See Table 4.3 of the Revised NIS and the AA screening matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Cormorant	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size &amp; productivity rate – stable or increasing;</li> <li>- Distribution - Sufficient availability of suitable nesting sites.</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance at site &amp; areas ecologically connected areas– at levels not to significantly impact;</li> <li>- Barriers to connectivity - do not significantly impact access to site or</li> </ul>	<p>Revised NIS section 6.1.2.3, 6.2.4.2, 6.4.4</p> <p><u>Noise &amp; disturbance:</u> Vessels operating along the final 1km section of the outfall pipeline corridor have the potential to cause disturbance to the SCI species using the marine waters of Ireland's Eye SPA within its boundary. Vessels will be present in this area for up to 3 months, between April and October. There is potential for impacts resulting from connectivity with the North-West Irish Sea cSPA and Baldoyle Bay. Also potential for disturbance in vicinity of the microtunnell/interface. Disturbance will occur on a short term, localised and reversible basis. There is substantial alternative habitat beyond the zone of influence, I am satisfied that no significant effect on these species are expected.</p> <p><u>Water quality and habitat deterioration:</u> Potential pollution incidents (bentonite release), surface venting and elevated</p>	<p>None required beyond implementation of the CEMP and SWMP.</p>

	other sites outside the SPA.	suspended sediments arising from dredging or piling plume originating from the outfall pipeline corridor. During operation, the operational plume could also result water quality and habitat deterioration.	
Herring Gull	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size &amp; productivity rate – stable or increasing;</li> <li>- Distribution - Sufficient availability of suitable nesting sites.</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance at site &amp; areas ecologically connected areas– at levels not to significantly impact;</li> <li>- Barriers to connectivity - do not significantly impact access to site or other sites outside the SPA.</li> </ul>	<p>With the exception of a small surface plume which falls within the Ireland's Eye SPA boundary all of the plume discharge are predicted to disperse to the north of the outfall pipeline corridor. The prey species of the SCI species of Ireland's Eye SPA are highly mobile and the birds follow their prey. There will be a temporary low level elevated levels of suspended sediments arising however I am satisfied that there will be no reduction in prey species across the expanse of marine waters in the wider area. Construction activities will result in highly localised, temporary and reversible effects. Any potential for impacts outside of SPA on ecologically connected area are temporary and not significant. Sufficient locations, areas, and availability of suitable habitats to support the population and the foraging biomass it requires across the site shall remain unaffected. Modelling of the operational discharge shows that the discharge from the marine diffuser will disperse and dissipate over a large area. I am satisfied there will be no impact on the prey species of the SPA SCIs through this impact pathway.</p> <p><u>Habitat loss:</u> The seabed habitat disturbance occurs outside of and between 200m and 300m to the north of the marine waters of this SPA. will result in no loss of habitat available to the SCI species. Small numbers of herring gull were recorded within the zone of influence of the habitat loss impact pathway within Baldoyle study area. No barriers to connectivity shall be installed which could impact breeding populations' access to the SPA or other ecologically important sites. No loss of habitat expecting from pipe laying works.</p>	
Kittiwake	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size &amp; productivity rate – stable or increasing;</li> <li>- Distribution - Sufficient availability of suitable nesting sites;</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance at site &amp; areas ecologically connected areas– at levels not to significantly impact;</li> <li>- Barriers to connectivity-</li> </ul>		



	number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.		
Guillemot	<p>Maintain favourable conservation conditions</p> <ul style="list-style-type: none"> <li>- Breeding population size &amp; productivity rate – stable or increasing;</li> <li>- Distribution - Sufficient availability of suitable nesting sites;</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance at site &amp; areas ecologically connected areas– at levels not to significantly impact;</li> <li>- Barriers to connectivity - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>	<p>Revised NIS section 6.1.2.2, 6.2.4.2, 6.4.4</p> <p><u>Noise &amp; disturbance:</u> Vessels involved in constructing the outfall pipeline will have the potential for visual disturbance of SCI species using marine waters of Ireland's Eye SPA. There is potential for impacts resulting from connectivity with the North-West Irish Sea cSPA and Baldoyle Bay. The SPA Guillemot and Razorbill population will not be susceptible to significant visual vessel disturbance impacts except for the July to mid-August period.</p> <p><u>Water quality and habitat deterioration</u> during construction: pollution incidents and elevated suspended sediments arising from dredging or piling plume originating from the outfall pipeline corridor. During operation, the operational plume could also result water quality and habitat deterioration. Save for a small surface plume which falls to the north of Ireland's Eye all of the plume discharge are predicted to disperse to the north of the outfall pipeline corridor. The prey species of the SCI species of Ireland's Eye SPA are highly mobile and the birds follow their prey. There will be a temporary low level elevated levels of suspended sediments arising from dredging however I am satisfied that there will be no reduction in prey species across the expanse of marine waters in the wider area.</p> <p>Modelling of the operational discharge shows that the discharge from the marine diffuser will disperse and dissipate over a large area. On this basis, there will be no impact on the prey species of the SCIs through this impact pathway.</p> <p><u>Habitat loss:</u> the seabed habitat disturbance occurs outside of and between 200m and 300m to the north of the marine waters of this SPA. No</p>	<p>Yes, mitigation is required in respect of noise and disturbance. See Section 7.2 of the Revised NIS. Also Vessel Management Plan (see Appendix F of the Revised NIS)</p>
Razorbill;	<p>Maintain favourable conservation conditions</p> <ul style="list-style-type: none"> <li>- Breeding population size &amp; productivity rate – stable or increasing;</li> <li>- Distribution - Sufficient availability of suitable nesting sites;</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of</li> </ul>		

	<p>suitable habitat and availability;</p> <ul style="list-style-type: none"> <li>- Disturbance at site &amp; areas ecologically connected areas– at levels not to significantly impact;</li> <li>- Barriers to connectivity - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA</li> </ul>	<p>barriers to connectivity shall be installed which could impact populations' access to the SPA or other ecologically important sites.</p> <p>No loss of habitat expecting from pipe laying works</p>	
--	---	--	--

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.

Assessment of issues that could give rise to adverse effects:

(i) **Hydrological impact (water quality and habitat deterioration) during construction and operation**

In view of the conclusions above relating to upstream pollution events and bentonite release and surface venting, which would have a negligible impact on Baldoye Bay and the 5km (minimum) distance of Ireland's Eye SPA no impact is possible at this site due to such impacts. I accept the information presented in section 6.2.4.2 of the Revised NIS that there would be no impact to the prey species of the SPA due to the construction plume, including by reason of the small surface plume effects at a distance of 350m from the north of the SPA, which is outside the designated area. As the operational plume is not predicted to impact the reefs of Ireland's Eye SAC (900m from the marine diffuser) it can also be concluded that there will be no impact on the prey species of the SPA. It may be concluded based on the evidence presented that the water quality and habitat deterioration impact pathway would not adversely affect the conservation objectives for Ireland's Eye SPA.

**Mitigation measures:** None required beyond implementation of the CEMP and SWMP.

(ii) **Airborne noise / disturbance during operation**

Kittiwake, Herring Gull & Cormorant

Any disturbance/ displacement effects that do occur will be on a short term, localised and reversible basis. For any birds that are displaced, there is likely to be substantial alternative habitat beyond the zone of influence of the project. No birds would be lost from the SPA population. The conservation objective for this SCI will be unaffected.

Guillemot and Razorbill

During the breeding season, the species that were recorded in the highest numbers were guillemot and razorbill. Ireland's Eye hosts breeding auk species, namely guillemot and razorbill, see 5.1.3 of Revised NIS, which may be impacted by significant visual vessel disturbance impacts for the July to mid-August period. During this time, mitigation is required. With a foraging distance of 37.8 km from colonies in the case of Guillemots and 23.7km for Razorbill, habitat in the vicinity of outfall pipeline corridor is not considered

critical. However, when both species leave the breeding colony (mid-July to end of July) they are more sensitive to disturbance and displacement impacts. It can be reasonably concluded that if vessel activity is not appropriately managed in this time period birds could be lost from the SPA. Therefore mitigation is necessary to address potential adverse effects on site integrity for these SCIs Razorbill and Guillemot.

### **Mitigation measures**

Section 7.2 of the Revised NIS relates. A Vessel Management Plan (see Appendix F of the Revised NIS) is proposed with two functions. The first is to ensure that the Ireland's Eye SPA boundary is not unnecessarily approached or crossed by construction vessels working on the marine diffuser and subsea pipeline section at any time during the construction phase. The second is to ensure the protection of guillemot and razorbill when they are leaving the Ireland's Eye colony in July to mid-August at the end of the breeding season. The bird observer appointed by the contractor as part of the Vessel Management Plan, will notify the Marine Coordinator if there are any additional agglomerations of SCI species during their watching brief in place over the period of July to 31 August in any given year during the construction period and will advise if boats are to leave the area as soon as it is safe to do so.

I am satisfied that the plan will achieve the two objectives which I consider are appropriate and sufficient to ensure that there are no adverse effects due to airborne noise or visual disturbance.

1. The proposal to minimise travel of vessels into the SPA boundary through defining an exclusion area is appropriate and is clearly stated in the plan. I am satisfied that it is capable of implementation and that it will ensure no unforeseen impacts related to vessel disturbance, which have not been considered in the Revised NIS or are not known at the time of writing.
2. The measure to address potential impacts on young possibly flightless auks who may gather in large numbers when attempting to leave the area with adults involves suitable positioning of a bird observer. That person will have the power to request boats to leave the area in appropriate circumstances.

Subject to these measures I consider that the conservation objective for Guillemot and Razorbill will be unaffected and there will be no adverse effect on the integrity of the site due to airborne noise or visual disturbance. It can be concluded that the conservation objectives for the SCIs of this SPA are not compromised by airborne noise or visual disturbance

### **(iii) Habitat loss**

Herring gull was the only SCI of this SPA which was recorded in low numbers in any of the areas impacted by habitat loss (compounds 9 and 10) according to the Revised NIS. The species is commonly encountered in the area and is highly adaptable with large foraging areas. While there could be a temporary redistribution of a small number of birds none would be lost from the SPA population. I concur with the applicant's submissions which indicate that the temporary and reversible effects which would result are not of significant magnitude or duration to affect maintenance of the Ireland's Eye SPA herring gull population, the natural range or the amount of habitat available to the population.

Regarding the other SCIs of this site the use of the water by auks and the potential impacts and the mitigation required has been considered earlier

under the airborne noise and visual disturbance pathway. The same assessment and conclusions may be drawn in relation to the matter of habitat loss if the Board considered that this impact category requires consideration. In the circumstances I consider that the assessment on the auk species which are SCIs fits more conveniently within the former pathway. I consider that it can be concluded with certainty that the conservation objectives for the SCIs of Ireland's Eye SPA would not be compromised as a result of habitat loss

**Mitigation measures:** None required

### Findings and conclusions

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Ireland's Eye SPA. No direct impacts are predicted. Possible indirect impacts (disturbance and loss of Guillemot and Razorbill) require measures to mitigate impact on bird species in the form of a Vessel Management Plan, and regarding hydrological impact through implementation of the CEMP and SWMP. I am satisfied that the mitigation measure proposed to disturbance effects have been assessed as effective and can be implemented and conditioned if permission is granted.

### Reasonable scientific doubt

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects

### Site Integrity

The proposed development will not affect the attainment conservation objectives of the Ireland's Eye SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

### North Dublin Bay SAC (000199):

(2.3km to the south of the marine outfall)

### Summary of Key issues that could give rise to adverse effects (from screening stage):

- (i) Water quality and habitat deterioration (construction and operation)  
Table 4.3 of the Revised NIS and the AA screening matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Mudflats and sandflats not covered by seawater at low tide;	To maintain the favourable conservation condition. <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Maintain community extent.</li> <li>- Conserve community structure.</li> <li>- Distribution – conserve in natural condition</li> </ul>	2.3km to the south of the marine outfall.  <b>Water quality and habitat deterioration</b> (construction and operation): From suspended sediment	No further mitigation is required other than the implementation of the CEMP and surface water management

Annual vegetation of drift lines	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Habitat distribution – no decline, or change.</li> <li>- Physical structure – maintain.</li> <li>- Vegetation structure – maintain range of coastal habitats.</li> <li>- Vegetation composition - Maintain the presence of species-poor communities with typical species.</li> <li>- Negative indicator species to represent less than 5% cover.</li> </ul>	<p>arising from dredging or piling plume: None of the discharged sediment is predicted to reach the boundary of the SAC or qualifying habitats and therefore no impact is expected within this SAC.</p> <p>From discharge plume – operational stage. Modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will not reach the boundary of the SAC or QI's.</p>	plan for construction activities associated with all elements of the projects.
Salicornia and other annuals colonizing mud and sand;	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change</li> <li>- Physical structure: sediment supply <ul style="list-style-type: none"> <li>- maintain natural circulation of sediments and organic matter.</li> </ul> </li> <li>- Physical Structure: creeks and pans - maintain structure.</li> <li>- Physical structure: flooding regime <ul style="list-style-type: none"> <li>- maintain tidal regime.</li> </ul> </li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation structure: vegetation height – maintain variation.</li> <li>- Vegetation structure: vegetation cover – maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: species and sub-communities – maintain presence of species-poor communities.</li> <li>- Vegetation structure: No significant expansion of common cordgrass.</li> </ul>		
Atlantic salt meadows	<p>Maintain the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change</li> <li>- Physical structure: sediment supply <ul style="list-style-type: none"> <li>- maintain natural circulation of sediments and organic matter</li> </ul> </li> <li>- Physical Structure: creeks and pans <ul style="list-style-type: none"> <li>- maintain structure.</li> </ul> </li> <li>- Physical structure: flooding regime <ul style="list-style-type: none"> <li>- maintain tidal regime.</li> </ul> </li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation structure: vegetation height – maintain variation.</li> <li>- Vegetation structure: vegetation cover – maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: species and sub-communities – maintain range of sub- communities.</li> </ul>		

	<ul style="list-style-type: none"> <li>- Vegetation structure: no significant expansion of common cordgrass.</li> </ul>		
Mediterranean salt meadows.	<p>Maintain the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change</li> <li>- Physical structure: sediment supply – maintain/restore natural circulation of sediments and organic matter</li> <li>- Physical structure: creeks and pans -maintain structure.</li> <li>- Physical structure: flooding regime - maintain tidal regime.</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation structure: vegetation height – maintain variation.</li> <li>- Vegetation structure: vegetation cover – maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: typical species – maintain range of sub-communities.</li> <li>- Vegetation structure: negative indicator species - no significant expansion of common cordgrass.</li> </ul>		
Embryonic shifting dunes	<p>Restore the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change</li> <li>- Physical structure: sediment supply – maintain/restore natural circulation of sediments and organic matter</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation composition: plant health —+95% of sand couch should be healthy.</li> <li>- Vegetation composition: typical species – maintain range of sub-communities.</li> <li>- Vegetation composition: Negative indicator species to represent less than 5% cover.</li> </ul>		
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	<p>Restore the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change.</li> <li>- Physical structure: sediment supply – maintain natural circulation of sediments and organic matter</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> </ul>		

	<ul style="list-style-type: none"> <li>- Vegetation composition: plant health —+95% of marram grass and/or lyme-grass should be healthy.</li> <li>- Vegetation composition: typical species – maintain range of sub-communities.</li> <li>- Vegetation composition: Negative indicator species to represent less than 5% cover.</li> </ul>		
Fixed coastal dunes with herbaceous vegetation (grey dunes)	<p>Restore the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change.</li> <li>- Physical structure: maintain natural circulation of sediments and organic matter</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation structure – bare ground should not exceed 10%.</li> <li>- Vegetation structure: sward height – maintain variation.</li> <li>- Vegetation composition: typical species – maintain range of sub-communities.</li> <li>- Vegetation composition: negative indicator species of less than 5% cover.</li> <li>- Vegetation composition: scrub/trees to represent less than 5% cover.</li> </ul>		
Humid dune slacks	<p>Restore the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Habitat area - is increasing.</li> <li>- Distribution – no decline or change.</li> <li>- Physical structure: maintain natural circulation of sediments and organic matter.</li> <li>- Physical structure – maintain natural hydrological regime.</li> <li>- Vegetation structure: zonation – maintain range of coastal habitats.</li> <li>- Vegetation structure – bare ground should not exceed 5% or 20% for pioneer slacks.</li> <li>- Vegetation structure: height – maintain variation.</li> <li>- Vegetation composition: typical species – maintain range of sub-communities.</li> <li>- Vegetation composition: maintain less than 40% cover of creeping willow.</li> <li>- Vegetation composition: negative indicator species of less than 5% cover.</li> <li>- Vegetation composition: scrub/trees to represent less than 5% cover or under control.</li> </ul>		

Petalwort	Maintain the favourable conservation condition - Distribution of & population size – no decline. - Habitat area – no decline. - Hydrological conditions – maintain. - Vegetation structure: maintain.		
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p><b>Assessment of issues that could give rise to adverse effects:</b></p> <p><b>(i) Hydrological impact (water quality and habitat deterioration) during construction and operation</b></p> <p>None of the discharged sediment arising from dredging or piling plume is predicted to reach the boundary of the SAC or qualifying habitats and therefore no impact from suspended sediment is expected within this SAC. During operation, modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will not reach the boundary of the SAC or QI's.</p> <p><b>Mitigation measures:</b> None required beyond implementation of the CEMP and surface water management plan.</p>			
<p><b>Findings and conclusions</b></p> <p>The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.</p> <p>Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the North Dublin Bay SAC. No direct or indirect impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent deterioration of water quality have been assessed as effective and can be implemented and conditioned if permission is granted.</p>			
<p><b>Reasonable scientific doubt</b></p> <p>I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.</p>			
<p><b>Site Integrity</b></p> <p>The proposed development will not affect the attainment conservation objectives of the North Dublin Bay SAC. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.</p>			
<p><b>North Bull Island SPA (004006):</b> (2.3km to the south of the Marine Outfall)</p> <p><b>Summary of Key issues that could give rise to adverse effects (from screening stage):</b></p> <ul style="list-style-type: none"> <li>(i) Airborne noise / disturbance</li> <li>(ii) Hydrological (water quality and habitat deterioration)</li> </ul>			



(iii) Habitat loss See Table 4.1 of the revised NIS and Screening matrix above			
Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Light-bellied Brent Goose	<p>To maintain the favourable conservation condition.</p> <p>Population trend-stable or increasing.</p> <p>Distribution – no significant decrease in the range, timing and intensity of use of areas.</p>	<p>Possible <b>disturbance</b> or displacement of SCI species inside and outside the SPA as a result of construction stage activities. This SPA lies 2.3km to the south of the marine outfall. Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.</p> <p>Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the Revised NIS. SCI species of the North Bull Island SPA are more likely to utilise habitat within this SPA and the adjacent South Dublin Bay and River Tolka Estuary SPA, and the subsea habitats in the vicinity of these SPAs.</p> <p>Re <b>deterioration of water quality</b> in the SPA from construction and operational sediment and/or pollution plumes resulting in change in foraging potential: These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised.</p> <p>With regard to <b>habitat loss</b> impact pathway: no direct impact or indirect impact on the SPA or on wetland habitat.</p> <p>Black-headed gull and Curlew were recorded in small numbers within the footprint of the micro-tunnelling compound. The highly localised, temporary and reversible nature of the habitat loss impact pathway could result in a temporary redistribution of a small number of birds, none of which would be lost from the North Bull Island SPA population. Other SCI species of the North Bull Island SPA</p>	No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities associated with all elements of the projects.
Shelduck			
Teal			
Pintail			
Shoveler			
Oystercatcher			
Golden Plover			
Grey Plover			
Knot			
Sanderling			
Dunlin			
Black-headed Gotwit			
Bar-tailed Gotwit			
Curlew			
Redshank			
Turnstone			
Black-headed Gull			
Wetland and waterbirds	<p>To maintain the favourable conservation condition.</p> <p>Area habitat should be stable.</p>		

		were not recorded at locations of proposed micro-tunnelling compounds.	
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p>(i) <b>Airborne noise / disturbance during operation</b>  Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.  <b>Mitigation measures:</b> Not required</p> <p>(ii) <b>Hydrological impact (water quality and habitat deterioration) during construction and operation</b>  These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised. Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the Revised NIS.  <b>Mitigation measures:</b> None required beyond implementation of the CEMP and surface water management plan.</p> <p>(iii) <b>Habitat loss</b>  The highly localised, temporary and reversible nature of the habitat loss impact pathway could result in a temporary redistribution of a small number of birds, none of which would be lost from the North Bull Island SPA population.  <b>Mitigation measures:</b> None required.</p>			
<p><b>Findings and conclusions</b>  The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.</p> <p>Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the North Bull Island SPA. No direct or indirect impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.</p>			
<p><b>Reasonable scientific doubt</b>  I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects</p>			
<p><b>Site Integrity</b>  The proposed development will not affect the attainment conservation objectives of the North Bull Island SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.</p>			

**Malahide Estuary SPA (004025):**

(2.5km to the north of the Marine Outfall)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Airborne noise / disturbance
- (ii) Hydrological (water quality and habitat deterioration)
- (iii) Habitat loss

See Table 4.1 of the revised NIS and Screening Matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Great Crested Grebe	To maintain the favourable conservation condition.	Possible <b>disturbance</b> or displacement of SCI species inside and outside the SPA as a result of construction stage activities. This SPA lies 2.5km to the north of the marine outfall. Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.	No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities associated with all elements of the projects.
Light-bellied Brent Goose	Population trend-stable or increasing.	Potential for <b>connectivity</b> between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the Revised NIS. Birds recorded in and around the Baldoyle Bay SPA are overwhelmingly likely to be birds of the Baldoyle Bay SPA; SCI species of the Malahide Estuary SPA are more likely to utilise habitat within this SPA and the adjacent subsea habitats.  Re <b>deterioration of water quality</b> in the SPA from construction and operational sediment and/or pollution plumes resulting in change in foraging potential: These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised.  Curlew was recorded in small numbers within the footprint of the western microtunnelling compound. The highly localised, temporary and reversible nature of the <b>habitat loss</b> impact pathway could result in a temporary redistribution of a small number of birds, none of which would be lost from the SPA population. The remaining	
Shelduck			
Pintail	Distribution – no significant decrease in the range, timing and intensity of use of areas.		
Goldeneye			
Red-breasted Merganser			
Oystercatcher			
Golden Plover			
Grey Plover			
Knot			
Dunlin			
Black-tailed Godwit			
Bar-tailed Godwit			
Redshank			

		SCI were not recorded within the footprint of the micro-tunnelling compound.	
Wetland and Waterbirds	Habitat area: should be stable.	With regard to <b>habitat loss</b> pathway may result in the displacement of birds to alternative habitat.	
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p>(i) <b>Airborne noise / disturbance during operation</b>  Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.  <b>Mitigation measures:</b> Not required</p> <p>(ii) <b>Hydrological impact (water quality and habitat deterioration) during construction and operation</b>  These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised. Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the Revised NIS.  <b>Mitigation measures:</b> None required beyond implementation of the CEMP and surface water management plan.</p> <p>(iii) <b>Habitat loss</b>  The highly localised, temporary and reversible nature of the habitat loss impact pathway could result in a temporary redistribution of a small number of birds, none of which would be lost from the North Bull Island SPA population.  <b>Mitigation measures:</b> Not required.</p>			
<p><b>Findings and conclusions</b>  The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.</p> <p>Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Malahide Estuary SPA. No direct or indirect impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.</p>			
<p><b>Reasonable scientific doubt</b>  I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.</p>			
<b>Site Integrity</b>			

The proposed development will not affect the attainment conservation objectives of the Malahide Estuary SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

**Malahide Estuary SAC (000205):**

(2.5km north of the marine outfall)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

(i) Water quality and habitat deterioration (construction and operation)

See Table 4.1 of the revised NIS and Screening Matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Mudflats and sandflats not covered by seawater at low tide	To maintain the favourable conservation condition. <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Maintain community extent.</li> <li>- Conserve community structure.</li> <li>- Distribution – conserve in natural condition.</li> </ul>	2.5km north of the marine outfall.  <b>Water quality and habitat deterioration</b> (construction and operation): From suspended sediment arising from dredging or piling plume: None of the discharged sediment is predicted to reach the boundary of the SAC or qualifying habitats and therefore no impact is expected within this SAC.	No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities associated with all elements of the projects.
Salicornia and other annuals colonising mud and sand	To maintain the favourable conservation condition. <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Habitat distribution – no decline or change subject to natural processes.</li> <li>- Physical structure – maintain or restore natural circulation of sediments and organic matter.</li> <li>- Physical structure - maintain creek and pan structure, subject to natural processes.</li> <li>- Physical structure – maintain natural tidal regime.</li> <li>- Vegetation structure - Maintain range of coastal habitats.</li> <li>- Vegetation structure: vegetation height - Maintain structural variation within sward.</li> <li>- Vegetation structure: vegetation cover - Maintain more than 90% of area outside creeks vegetated.</li> <li>- Vegetation composition - Maintain the presence of species-poor communities listed in SMP.</li> <li>- Vegetation structure - No significant expansion of common cordgrass.</li> </ul>	From discharge plume – operational stage. Modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will not reach the boundary of the SAC or QI's	
Atlantic salt meadows	To restore the favourable conservation condition <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change</li> </ul>		

	<ul style="list-style-type: none"> <li>- Physical structure: sediment supply</li> <li>- maintain natural circulation of sediments and organic matter.</li> <li>- Physical Structure: creeks and pans – allow structure to develop.</li> <li>- Physical structure: flooding regime - maintain tidal regime.</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation structure: vegetation height – maintain variation.</li> <li>- Vegetation structure: vegetation cover – maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: species and sub-communities – maintain range of sub- communities.</li> <li>- Vegetation structure: no significant expansion of common cordgrass.</li> </ul>		
Mediterranean salt meadows	<p>Maintain the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline.</li> <li>- Physical structure: sediment supply – maintain/restore natural circulation of sediments and organic matter.</li> <li>- Physical structure: creeks and pans -maintain structure.</li> <li>- Physical structure: flooding regime - maintain tidal regime.</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation structure: vegetation height – maintain variation.</li> <li>- Vegetation structure: vegetation cover – maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: typical species – maintain range of sub-communities.</li> </ul> <p>Vegetation structure: negative indicator species - no significant expansion of common cordgrass.</p>		
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change.</li> <li>- Physical structure: sediment supply – maintain natural circulation of sediments and organic matter</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation composition: plant health →+95% of marram grass and/or lyme-grass should be healthy.</li> </ul>		

	<ul style="list-style-type: none"> <li>- Vegetation composition: typical species – maintain range of sub-communities.</li> <li>- Vegetation composition: Negative indicator species to represent less than 5% cover.</li> </ul>		
Fixed coastal dunes with herbaceous vegetation (grey dunes)	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change.</li> <li>- Physical structure: maintain natural circulation of sediments and organic matter.</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation structure – bare ground should not exceed 10%.</li> <li>- Vegetation structure: sward height – maintain variation.</li> <li>- Vegetation composition: typical species – maintain range of sub-communities.</li> <li>- Vegetation composition: negative indicator species of less than 5% cover.</li> <li>- Vegetation composition: scrub/trees to represent less than 5% cover.</li> </ul>		
Spartina swards	Was originally listed as a qualifying Annex I habitat for this SAC due to historical records of two rare forms of cordgrass. However, these forms are considered to be alien. In addition, all stands of cordgrass in Ireland are now regarded as common cordgrass. As a consequence, a conservation objective has not been prepared for this habitat. It is not necessary to assess the likely effects of plans or projects against this I habitat at this site.		
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p><b>Assessment of issues that could give rise to adverse effects:</b></p> <p><b>(i) Hydrological impact (water quality and habitat deterioration) during construction and operation</b></p> <p>None of the discharged sediment arising from dredging or piling plume is predicted to reach the boundary of the SAC or qualifying habitats and therefore no impact from suspended sediment is expected within this SAC. During operation, modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will not reach the boundary of the SAC or QI's.</p> <p><b>Mitigation measures: None required beyond implementation of the CEMP and surface water management plan.</b></p> <p><b>Findings and conclusions</b></p> <p>The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.</p> <p>Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Malahide Estuary SAC. No direct or</p>			

indirect impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.

#### Reasonable scientific doubt

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

#### Site Integrity

The proposed development will not affect the attainment conservation objectives of the Malahide Estuary SAC. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

#### Howth Head Coast SPA (004113):

(This SPA lies 2.6km to the south of the marine outfall)

#### Summary of Key issues that could give rise to adverse effects (from screening stage):

- (i) Airborne noise / disturbance
- (ii) Hydrological (water quality and habitat deterioration)
- (iii) Habitat loss

See Table 4.1 of the revised NIS and Screening Matrix above.

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Kittiwake	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size &amp; productivity rate – stable or increasing;</li> <li>- Distribution - Sufficient availability of suitable nesting sites;</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance at site &amp; areas ecologically connected areas – at levels not to significantly impact;</li> <li>- Barriers to connectivity - do not</li> </ul>	<p>Possible <b>disturbance</b> or displacement of SCI species inside and outside the SPA as a result of construction stage activities. Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.</p> <p>Disturbance and displacement will occur from waters in the vicinity of the outfall pipeline corridor and marine diffuser during construction. This will occur on a short term, localised and reversible basis, and may result in temporary displacement of birds.</p> <p>Re <b>deterioration of water quality</b> in the SPA from construction and operational sediment and/or pollution plumes resulting in change in foraging potential: These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to</p>	<p>No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities associated with all elements of the projects.</p>



	significantly impact access to site or other sites outside the SPA.	distance from the marine outfall, the conservation objectives for the SCI of this SPA are not compromised.  With regard to <b>habitat loss</b> impact pathway: Kittiwake was not recorded at the proposed micro-tunnelling compounds. No impact on the SCI species of this SPA arises.	
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p>(i) <b>Airborne noise / disturbance during operation</b> Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA. <b>Mitigation measures:</b> Not required</p> <p>(ii) <b>Hydrological impact (water quality and habitat deterioration) during construction and operation</b> These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised. Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the Revised NIS. <b>Mitigation measures:</b> None required beyond implementation of the CEMP and surface water management plan.</p> <p>(iii) <b>Habitat loss</b> The SCI species of this SPA will not be impacted as a result of habitat loss. <b>Mitigation measures:</b> None required.</p>			
<p><b>Findings and conclusions</b> The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.</p> <p>Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Howth Head Coast SPA. No direct or indirect impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality and habitat deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.</p>			
<p><b>Reasonable scientific doubt</b> I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects</p>			
<p><b>Site Integrity</b></p>			

The proposed development will not affect the attainment conservation objectives of the Howth Head Coast SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

**South Dublin Bay and River Tolka Estuary SPA (004024):**

(This SPA lies 7.6km to the south of the marine outfall)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Airborne noise / disturbance
- (ii) Hydrological (water quality and habitat deterioration)
- (iii) Habitat loss

See Table 4.1 of the revised NIS and Screening Matrix above.

See Table 7.1 of the Revised NIS and Screening matrix above.			
Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Light-bellied Brent Goose	To maintain the favourable conservation condition.	Possible <b>disturbance</b> or displacement of SCI species inside and outside the SPA as a result of construction stage activities. Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.  Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the Revised NIS. SCI species of the SPA are more likely to utilise habitat within the SPA and the adjacent subsea habitats.	No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities associated with all elements of the projects.
Oystercatcher	Population – stable or increasing.		
Ringed Plover	Distribution - No significant decrease in the range, timing or intensity of use of areas		
Knot			
Sanderling			
Dunlin			
Bar-tailed Godwit			
Redshank			
Black-headed Gull	To maintain the favourable conservation condition. - Passage population: no significant decline. - Distribution roosting areas: no significant decline. - Prey: no significant decline. - Barriers: no significant increase. - Disturbance at roosting site: levels that do not adversely affect numbers of roseate tern among the post-breeding aggregation of terns.	Re <b>deterioration of water quality</b> in the SPA from construction and operational sediment and/or pollution plumes resulting in change in foraging potential: These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation	
Roseate Tern			

		objectives for the SCIs of this SPA are not compromised.	
Common Tern	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population (AONs): no significant decline.</li> <li>- Productivity rate: no significant decline.</li> <li>- Passage population: no significant decline.</li> <li>- Distribution: breeding colonies: no significant decline.</li> <li>- Distribution roosting areas: no significant decline.</li> <li>- Prey: no significant decline.</li> <li>- Barriers: no significant increase.</li> <li>- Disturbance at breeding site: levels that not adversely affect.</li> <li>- Disturbance at roosting site: levels that do not adversely affect numbers of common tern among the post-breeding aggregation of terns.</li> </ul>	<p>With regard to <b>habitat loss</b> impact pathway: Black headed gull was the only SCI of this SPA recorded at the proposed micro-tunnelling compounds and was recorded in small numbers and could result in a temporary redistribution of a small number of birds, none of which would be lost from this SPA population. No impact on the SCI species of this SPA arises.</p>	
Arctic Tern	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Passage population: no significant decline.</li> <li>- Distribution roosting areas: no significant decline.</li> <li>- Barriers: no significant increase.</li> <li>- Disturbance at roosting site: levels that do not adversely affect numbers of common tern among the post-breeding aggregation of terns.</li> </ul>		
Wetland and Waterbirds	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area: should be stable.</li> </ul>		
Grey Plover	<p>Grey Plover is proposed for removal from the list of Special Conservation Interests for South Dublin Bay and River Tolka Estuary SPA. As a result, a site-specific conservation objective has not been set for this species.</p>		

	<p>Out of an abundance of caution this species is assessed using the same conservation objectives set for Ringed Plover, pending removal of this SCI:</p> <p>To maintain the favourable conservation condition.</p> <p>Population – stable or increasing.</p> <p>Distribution - No significant decrease in the range, timing or intensity of use of areas.</p>		
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p>(i) <b>Airborne noise / disturbance during operation</b>  Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA. Connectivity to other ecological areas with significant number of birds from this SPA being impacted by the proposed project considered to be remote.  <b>Mitigation measures:</b> Not required</p> <p>(ii) <b>Hydrological impact (water quality and habitat deterioration) during construction and operation</b>  These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised. Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the Revised NIS.  <b>Mitigation measures:</b> None required beyond implementation of the CEMP and surface water management plan.</p> <p>(iii) <b>Habitat loss</b>  No SCI species of this SPA will be impacted as a result of habitat loss.  <b>Mitigation measures:</b> None required.</p>			
<p><b>Findings and conclusions</b>  The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.</p> <p>Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the South Dublin Bay and River Tolka Estuary</p>			

SPA. No direct or indirect impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.

#### **Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects

#### **Site Integrity**

The proposed development will not affect the attainment conservation objectives of the South Dublin Bay and River Tolka Estuary SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

#### **Rogerstown Estuary SAC (000208):**

(This SAC is located 8.5km north of the marine outfall)

#### **Summary of Key issues that could give rise to adverse effects (from screening stage):**

(i) Hydrological (water quality and habitat deterioration)

See Table 4.1 of the revised NIS and Screening Matrix above

<b>Qualifying Interest features likely to be affected</b>	<b>Conservation Objectives Targets and attributes</b>	<b>Potential adverse effects</b>	<b>Mitigation required?</b>
Estuaries	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Maintain community extent of the <i>Zostera</i>-dominated community and the <i>Mytilus edulis</i>-dominated community.</li> <li>- Community structure - Conserve the high quality of the <i>Zostera</i>-dominated community and the <i>Mytilus edulis</i>-dominated community.</li> <li>- Community distribution – conserve Sand to coarse sediment with <i>Nephtys cirrosa</i> and <i>Scolecopsis squamata</i> community complex; Estuarine sandy mud to mixed sediment with <i>Tubificoides benedii</i>, <i>Hediste diversicolor</i> and <i>Peringia ulvae</i> community complex in natural condition.</li> <li>- Habitat distribution: no decline or change subject to natural processes.</li> <li>- Physical structure: sediment supply – maintain or restore natural circulation of sediments and organic matter.</li> </ul>	<p><b>Water quality and habitat deterioration</b> (construction and operation):</p> <p>From suspended sediment arising from dredging or piling plume: None of the discharged sediment is predicted to reach the boundary of the SAC or qualifying habitats and therefore no impact is expected within this SAC.</p> <p>From discharge plume – operational stage. Modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will not reach the boundary of the SAC or QI's</p>	No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities associated with all elements of the projects.

	<ul style="list-style-type: none"> <li>- Physical structure: creeks and pans – maintain structure.</li> <li>- Physical structure: flooding regime – maintain natural tidal regime.</li> <li>- Vegetation structure: zonation - Maintain the range of coastal habitats.</li> <li>- Vegetation structure: vegetation height – maintain structural variation within sward.</li> <li>- Vegetation structure: cover – maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: maintain the presence of species-poor communities listed in SMP.</li> <li>- Vegetation structure: negative indicator species: no significant expansion of common cordgrass.</li> </ul>		
Mudflats and sandflats not covered by seawater at low tide;	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Maintain community extent.</li> <li>- Community structure: Conserve high quality of the <i>Zostera</i>-dominated community and the <i>Mytilus edulis</i>-dominated community.</li> <li>- Community distribution – conserve Sand to coarse sediment with <i>Nephtys cirrosa</i> and <i>Scoleclopis squamata</i> community complex; Estuarine sandy mud to mixed sediment with <i>Tubificoides benedii</i>, <i>Hediste diversicolor</i> and <i>Peringia ulvae</i> community complex in natural condition.</li> </ul>		
Salicornia and other annuals colonising mud and sand;	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Habitat distribution – no decline or change subject to natural processes.</li> <li>- Physical structure: sediment supply – maintain or restore natural circulation of sediments and organic matter.</li> <li>- Physical structure: creeks and pans: maintain structure.</li> <li>- Physical structure: flooding regime: maintain natural tidal regime.</li> <li>- Vegetation structure: zonation: maintain the range of coastal habitats.</li> <li>- Vegetation structure: vegetation height: maintain structural variation within sward.</li> </ul>		

	<ul style="list-style-type: none"> <li>- Vegetation structure: cover: maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: maintain the presence of species-poor communities listed in SMP.</li> <li>- Vegetation structure: negative indicator species: no significant expansion of common cordgrass.</li> </ul>		
Atlantic salt meadows;	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area: is stable or increasing.</li> <li>- Habitat distribution: no decline or change subject to natural processes.</li> <li>- Physical structure: sediment supply: maintain or restore natural circulation of sediments and organic matter.</li> <li>- Physical structure: creeks and pans: allow to develop.</li> <li>- Physical structure: flooding regime: maintain natural tidal regime.</li> <li>- Vegetation structure: zonation: maintain the range of coastal habitats.</li> <li>- Vegetation structure: vegetation height: maintain structural variation within sward.</li> <li>- Vegetation structure: cover: maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: maintain the presence of species-poor communities listed in SMP.</li> <li>- Vegetation structure: negative indicator species: no significant expansion of common cordgrass.</li> </ul>		
Mediterranean salt meadows;	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area: is stable or increasing.</li> <li>- Habitat distribution: no decline or change subject to natural processes.</li> <li>- Physical structure: sediment supply: maintain or restore natural circulation of sediments and organic matter.</li> <li>- Physical structure: creeks and pans: maintain structure.</li> <li>- Physical structure: flooding regime: maintain natural tidal regime.</li> <li>- Vegetation structure: zonation: maintain the range of saltmarsh habitats.</li> <li>- Vegetation structure: vegetation height: maintain structural variation within sward.</li> </ul>		

	<ul style="list-style-type: none"> <li>- Vegetation structure: cover: maintain +90% of area outside creeks vegetated.</li> <li>- Vegetation composition: maintain range of subcommunities with characteristic species listed in SMP.</li> <li>- Vegetation structure: negative indicator species: no significant expansion of common cordgrass.</li> </ul>		
Shifting dunes along the shoreline;	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area: is increasing.</li> <li>- Habitat distribution: no decline or change subject to natural processes.</li> <li>- Physical structure: sediment supply: maintain or restore natural circulation of sediments and organic matter.</li> <li>- Vegetation structure: zonation: maintain the range of coastal habitats.</li> <li>- Vegetation composition: 95% of marram grass and/or lyme-grass should be healthy.</li> <li>- Vegetation composition: maintain range of species-poor communities.</li> <li>- Vegetation structure: negative indicator species to represent less than 5% cover.</li> </ul>		
Fixed coastal dunes with herbaceous vegetation	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area: is increasing.</li> <li>- Habitat distribution: no decline or change subject to natural processes.</li> <li>- Physical structure: sediment supply: maintain natural circulation of sediments and organic matter.</li> <li>- Vegetation structure: zonation: maintain the range of coastal habitats.</li> <li>- Vegetation structure: bare ground should not exceed 10% of fixed dune habitat.</li> <li>- Vegetation structure: sward height: maintain structural variation.</li> <li>- Vegetation composition: maintain range of sub-communities.</li> <li>- Vegetation composition: negative indicator species to represent less than 5% cover.</li> <li>- Vegetation composition: scrub/trees: no more than 5% cover.</li> </ul>		
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted Revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p>			



Assessment of issues that could give rise to adverse effects:

**(i) Hydrological impact (water quality and habitat deterioration) during construction and operation**

None of the discharged sediment arising from dredging or piling plume is predicted to reach the boundary of the SAC or qualifying habitats and therefore no impact from suspended sediment is expected within this SAC. During operation, modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will not reach the boundary of the SAC or QI's.

**Mitigation measures:** None required beyond implementation of the CEMP and surface water management plan.

**Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Rogerstown Estuary SAC. No direct or indirect impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.

**Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects

**Site Integrity**

The proposed development will not affect the attainment conservation objectives of the Rogerstown Estuary SAC. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

**Rogerstown Estuary SPA (004006):**

(This SPA lies 8.5km to the north of the marine outfall)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Airborne noise / disturbance
- (ii) Hydrological (water quality and habitat deterioration)
- (iii) Habitat loss

See Table 4.1 of the revised NIS and AA Screening Matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Greylag Goose	To maintain the favourable conservation condition.	Possible <b>disturbance</b> or displacement of SCI species inside and outside the SPA as a result of construction stage activities. Noise sources will not extend	No further mitigation is required other than the
Brent Goose			

Shelduck	Population trend- stable or increasing.  Distribution – no significant decrease in the range, timing and intensity of use of areas.	into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.  Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the Revised NIS. SCI species of the Rogerstown Estuary SPA are more likely to utilise habitat within this SPA and the adjacent subsea habitats in the vicinity of these SPAs.  Re <b>deterioration of water quality</b> in the SPA from construction and operational sediment and/or pollution plumes resulting in change in foraging potential: These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised.  With regard to <b>habitat loss</b> impact pathway: Ringed plover was recorded at the proposed micro-tunnelling compounds, the revised NIS states these birds originate from the Ireland's Eye SPA. No other SCI birds of this Rogerstown Estuary SPA were recorded at the compounds. No impact on SCI species of this SPA arises.	implementation of the CEMP and surface water management plan for construction activities associated with all elements of the projects.
Shoveler			
Oystercatcher			
Ringed Plover			
Grey Plover			
Knot			
Dunlin			
Black-tailed Gotwit			
Redshank			
Wetland and waterbirds	To maintain the favourable conservation condition of wetland habitat. Area should be stable.	With regard to <b>habitat loss</b> impact pathway: no direct impact or indirect impact on the SPA or on wetland habitat.	
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p>(iv) <b>Airborne noise / disturbance during operation</b> Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA. <b>Mitigation measures:</b> Not required</p>			

**(v) Hydrological impact (water quality and habitat deterioration) during construction and operation**

These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised. Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the revised NIS.

**Mitigation measures:** None required beyond implementation of the CEMP and surface water management plan.

**(vi) Habitat loss**

No SCI species of this SPA will be impacted as a result of habitat loss.

**Mitigation measures:** None required.

**Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Rogerstown Estuary SPA. No direct or indirect impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.

**Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects

**Site Integrity**

The proposed development will not affect the attainment conservation objectives of the Rogerstown Estuary SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

**South Dublin Bay SAC (000210):**

(9.1km to the south of the Marine Outfall)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Hydrological (water quality and habitat deterioration)

In the absence of site-specific conservation objectives in respect of (i) annual vegetation of drift lines (ii) salicornia & other annuals colonising mud and sand, and (iii) embryonic shifting dunes, the conservation objectives of North Dublin Bay SAC are used as a surrogate in as far as they apply to the designation features of both protected sites. Targets and attributes as they apply to these three QI features are summarised and assessed below.

See Table 4.1 of the Revised NIS and AA Screening Matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Mudflats and sandflats not covered by seawater at low tide	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Community extent: maintain the extent of the Zostera-dominated community.</li> <li>- Community structure: Conserve the high quality of the Zostera-dominated community.</li> <li>- Community distribution: conserve Fine sands with Angulus tenuis community complex in natural condition.</li> </ul>	<p><b>Water quality and habitat deterioration</b> (construction and operation): From suspended sediment arising from dredging or piling plume: None of the discharged sediment is predicted to reach the boundary of the SAC or qualifying habitats and therefore no impact is expected within this SAC.</p> <p>From discharge plume – operational stage. Modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will not reach the boundary of the SAC or QI's.</p>	No
Annual vegetation of drift lines	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area: is stable or increasing.</li> <li>- Habitat distribution: no decline, or change.</li> <li>- Physical structure: maintain.</li> <li>- Vegetation structure: maintain range of coastal habitats.</li> <li>- Vegetation composition: maintain the presence of species-poor communities with typical species.</li> <li>- Negative indicator species to represent less than 5% cover.</li> </ul>		
Salicornia and other annuals colonising mud and sand;	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change</li> <li>- Physical structure: sediment supply - maintain natural circulation of sediments and organic matter.</li> <li>- Physical Structure: creeks and pans - maintain structure.</li> <li>- Physical structure: flooding regime - maintain tidal regime.</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation structure: vegetation height – maintain variation.</li> <li>- Vegetation structure: vegetation cover – maintain +90% of area outside creeks vegetated.</li> </ul>		

	<ul style="list-style-type: none"> <li>- Vegetation composition: species and sub-communities – maintain presence of species-poor communities.</li> <li>- Vegetation structure: No significant expansion of common cordgrass.</li> </ul>		
Embryonic shifting dunes	<p>Restore the favourable conservation condition</p> <ul style="list-style-type: none"> <li>- Habitat area - is stable or increasing.</li> <li>- Distribution – no decline or change</li> <li>- Physical structure: sediment supply – maintain/restore natural circulation of sediments and organic matter</li> <li>- Vegetation structure: zonation – maintain range of habitats.</li> <li>- Vegetation composition: plant health – +95% of sand couch should be healthy.</li> <li>- Vegetation composition: typical species – maintain range of sub- communities.</li> <li>- Vegetation composition: Negative indicator species to represent less than 5% cover.</li> </ul>		
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p><b>(i) Hydrological impact (water quality and habitat deterioration) during construction and operation</b></p> <p>None of the discharged sediment arising from dredging or piling plume is predicted to reach the boundary of the SAC or qualifying habitats and therefore no impact from suspended sediment is expected within this SAC. During operation, modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will not reach the boundary of the SAC or QI's.</p> <p><b>Mitigation measures:</b> None required.</p>			
<p><b>Findings and conclusions</b></p> <p>The applicant determined that no mitigation is required for this SAC.</p> <p>Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the South Dublin Bay SAC. No direct or indirect impacts are predicted.</p>			
<p><b>Reasonable scientific doubt</b></p> <p>I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects</p>			

**Site Integrity**

The proposed development will not affect the attainment conservation objectives of the South Dublin Bay SAC. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

**Lambay Island SAC (000204):**

(9.3km north-east of the marine outfall)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

- Underwater noise / disturbance
- Hydrological (water quality and habitat deterioration)

See Table 4.1 of the revised NIS and AA Screening Matrix above

The Conservation Objectives for Lambay Island SAC (000204) was updated in December 2024 to include an additional Qualifying Interest (QI), Harbour Porpoise *Phocoena phocoena* (1351). As the addition of this QI occurred after the submission of the revised NIS by the applicant, this QI for this SAC was not assessed in the revised NIS. This QI has been assessed by the Inspectorate Marine Ecologist, refer to attached report, appendix 5 and informs this AA.

<b>Qualifying Interest features likely to be affected</b>	<b>Conservation Objectives Targets and attributes</b>	<b>Potential adverse effects</b>	<b>Mitigation required?</b>
Reefs	To maintain the favourable conservation condition. -Habitat area is stable or increasing. - Distribution is stable or increasing. - Community structure: conserve intertidal reef community complex; Laminaria-dominated community complex in a natural condition.	Revised NIS section 6.2.3  This site is located 9.3km north-east of the marine outfall.  <b>Water quality and habitat deterioration</b> (construction and operation): From suspended sediment arising from dredging or piling plume: None of the discharged sediment is predicted to reach the boundary of the SAC or qualifying habitats and therefore no impact is expected within this SAC.	No
Vegetated sea cliffs of the Atlantic and Baltic coasts	To maintain the favourable conservation condition. -Habitat length: area stable. - Habitat distribution: no decline. - Physical structure: no alteration to natural functioning of geomorphological & hydrological processes due to artificial structures. - Vegetation structure: zonation - maintain range of sea cliff habitat	From discharge plume – operational stage. Modelling results indicate that the plume created by the effluent discharge will be subject to significant dispersion; the effluent will not reach the boundary of the SAC or QI's.  The two target qualifying interests are outside the influence from the outfall during both construction and operation.	

	<p>zonations including transitional zones.- Vegetation structure (height): Maintain structural variation within sward.</p> <p>-Vegetation composition: Maintain range of sub-communities.</p> <p>- Vegetation composition: negative indicator species to represent less than 5% cover.</p> <p>- Vegetation composition: cover of bracken on grassland and/or heath less than 10%. Cover of woody species on grassland and/or heath less than 20%.</p>	No impact arises on the two designated habitats in relation to underwater noise and disturbance.	
Harbour Porpoise	<p>To maintain the favourable conservation condition.</p> <p>-Access to suitable habitat: Species range within the site should not be restricted by artificial barriers to site use.</p> <p>- Disturbance: Human activities should occur at levels that do not adversely affect the Harbour Porpoise community at the site.</p>	<p>The effect on harbour porpoise due to <u>water quality and habitat deterioration</u> impacts could occur due to the plume from dredging. This is predicted to result in elevated suspended sediment above 5mg/l over 4.5 km<sup>2</sup> (1.5 km<sup>2</sup> is within SAC). This is 0.55% of the total SAC and the duration of dredging is expected to be 60 days. The plume would have a localised temporary impact on the foraging behaviour of the harbour porpoise due to reduced visibility in the vicinity of the dredging. The species has a large foraging range and in addition is not averse to inhabiting high turbidity waters.</p> <p>From <b>discharge plume – operational stage</b>. The concentration of suspended sediments is predicted during the operational phase is to be below that detectable by this Annex II species and no impact to this qualifying species is expected.</p> <p><u>Underwater noise and disturbance</u>- expected noise levels due to dredging will not be sufficient to cause any damage but is likely to induce avoidance behaviour prior to entering the area of the discharge plume. The noise created by the piling was higher and above the temporal threshold shift (TTS) for the harbour porpoise when in close proximity to the source.</p>	Yes, mitigation required, see section 7.4 of the revised NIS

		<p>Any disruption to benthos during construction of the outfall pipe will be temporary, save for the diffuser. The diffuser is not expected to create a <u>habitat loss</u> to the harbour porpoise and could create pibenthic faunal assemblages to the site, attracting prey species for the harbour porpoise.</p> <p>During operation, it is expected that the plume will visibly be imperceptible to porpoises within 50-100m of the diffuser; it may enhance plankton productivity which may encourage feeding from prey species in the vicinity, but the impact of this is expected to be negligible.</p>	
Grey Seal	<p>To maintain the favourable conservation condition.</p> <p>-Access to suitable habitat: Species range within the site should not be restricted by artificial barriers to site use.</p> <p>- Breeding behaviour: maintain breeding sites.</p> <p>- Moulting behaviour: moult haul-out sites should be maintained.</p> <p>- Resting behaviour: The resting haul-out sites should be maintained.</p> <p>- Disturbance: human activities should occur at levels that do not adversely affect.</p>	<p>Revised NIS, section 6.2.3, 6.3.3</p> <p>The Revised NIS states that given the proximity and size of these populations, it is extremely likely that both seals currently forage within and around the proposed discharge site.</p> <p><u>Water quality and habitat deterioration</u></p> <p>During construction, modelling indicates that the resulting suspended sediments created by the discharge of spoil has been limited to a northern deposition and generally localised manner. The plume does not directly impact the Lambay island SAC, although there is connectivity through the plumes impact to waters south of the SAC frequently used by these QI's.</p> <p>The revised NIS states that sedimentation concentration levels are similar to the natural back ground levels of suspended sediments.</p> <p>The size of the plume into the area surrounding the SAC is not likely to be significant, and negligible when compared to the foraging range elsewhere around the Lambay Island SAC. Seals are expected to show a simple avoidance reaction when not feeding though predation may be encouraged within or close to the plume, with fish feeding on suspended benthos. Impact on these species is considered to be</p>	
Harbour Seal			



		<p>negligible although this may introduce minor behavioural changes for the short construction period of 60 days.</p> <p>During operation, the discharge is expected to provide a localised plume visible to marine mammals at certain time of the year and may attract species near the diffuser in search of prey. Impact of the plume to the waters south of the SAC will be for the life-time of the outfall, however as the plume area is over a small area of the animals habitat range, the magnitude of impact is not significant.</p> <p><u>Underwater noise and disturbance-</u> there is potential for adverse impacts on the qualifying interests grey seal and harbour seal. The revised NIS outlines that the majority of sounds produced by dredging will be at frequencies within the lower auditory range and sensitivity for seals. The expected levels are likely to be sufficient to alter species behaviour particularly when close to the source (&lt;1km) but not sufficient to cause damage. Greatest impact would be at the low frequency of 1 kHz which potentially can be heard 20 km away. Noise created by piling was higher and above the TTS for both seal species at locations close to the noise source. The noise impacts from piling are significantly greater and a high level of mitigation will also be required to ensure that these Annex II species are not found within close proximity to piling when it is started.</p>	
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p><b>(i) Water quality and habitat deterioration (construction and operation)</b></p> <p><u>Reefs &amp; Vegetated Sea cliffs of the Atlantic and Baltic coasts</u></p> <p>The two qualifying interests are outside the influence from the outfall during both construction and operation.</p> <p><u>Grey Seal &amp; Harbour Seal</u></p> <p>The impact to these species from the construction dredging plume will be negligible, although this may introduce minor behavioural changes for the short construction period. As the direct impact by the plume will be very localised (within 1,500m of the source), short term and will not deteriorate any resources within the range of the</p>			

species, no significant impact is expected from the dredging plume to these QIs. With respect to the operational plume, which will be long-term, and to the south of the SAC waters where these SCI species is likely to forage, I am satisfied having regard to the large foraging range available to these species, that no significant impact is expected from the operational plume to these QIs. As described in the revised NIS there is a possibility that seals may be attracted to the outfall discharge or to the increased productivity surrounding it resulting in a long-term negligible impact, which would not impact on the conservation objectives for the Lambay Ireland SAC. I accept these statements. It may be concluded based on the evidence presented that the water quality and habitat deterioration impact pathway would not adversely affect the conservation objectives for Lambay Island SAC.

**Harbour Purpose:**

I refer to the report prepared by Conor Donnolly, Inspectorate Marine Ecologist, attached as Appendix 5 to this Inspector's Report. The project outfall occurs within the boundaries of the Rockabill to Dalkey Island SAC whereas Lambay Island SAC is c.7km from it. The Conservation Objectives Supporting Documents for the SAC state that no detailed information is available on individual or group movements by Harbour Porpoise within or into/out of the sites however, as a highly mobile species, the Harbour Porpoise QIs of these sites may also use habitats in proximity to the outfall. The site-specific Conservation Objectives for the Harbour Porpoise QIs are consistent across the Rockabill to Dalkey Island SAC, Lambay Island SAC and Codling Fault Zone SAC, in that each comprises two attributes with the same measure and target set in each case. In all three SACs, the Conservation Objective for this QI is 'maintain'. Taking the above into account, the Inspectorate Marine Ecologist considers that the assessment undertaken for Harbour Porpoise as a QI of the Rockabill to Dalkey SAC is applicable to the Harbour Porpoise QIs of the Lambay Island SAC. Given the highly mobile nature of Harbour Porpoise, the same impact pathways apply and in view of the Conservation Objectives for this QI in each SAC, the same conclusions can be reached with regards no adverse effects on site integrity from this project alone and in combination and that there is no reasonable doubt remaining as to the absence of such effects.

Refer to assessment above in respect of Rockabill to Dalkey SAC.

**Mitigation measures:**

**Harbour Porpoise:**

During construction, pollution incidents can be managed through CEMP implementation.

**(ii) Underwater noise and disturbance**

**Grey Seal & Harbour Seal**

See detail above. Although these works are carried out outside the SAC, the impact pathway is open and mitigation is required to ensure that effects on this Annex II species do not compromise the conservation objectives for the SAC.

**Harbour porpoise:**

I refer to the report prepared by Conor Donnolly, Marine Ecologist, with the Board attached as Appendix 5 to this Inspector's Report. As a highly mobile species, the Harbour Porpoise QIs of these sites may also use habitats in proximity to the outfall. The revised NIS states that the overall level of dredging noise is expected to be low but is expected to induce some behavioural responses by Harbour Porpoises when in close proximity (<1km). It describes noise impacts from piling as significantly greater. In both cases it is proposed that these impacts will be addressed by mitigation.

Expected noise levels due to dredging and installation of the diffuser will not be sufficient to cause any damage but is likely to induce avoidance behaviour prior to

entering the area of the discharge plume. Although the majority of these works are carried out outside the SAC, the impact pathway is open and mitigation methods are required to ensure that effects on this Annex II species do not compromise the conservation objectives for the SAC.

**Mitigation measures:**

Grey Seal & Harbour Seal

A mitigation plan is presented in section 7.4 of the revised NIS. Mitigation during construction that create significant acoustic signatures will be undertaken during the main periods of marine works (piling and dredging) to ensure minimal impact to marine mammal within the vicinity of the survey works. This will include marine mammal observers and a high frequency hydrophone system so as to establish an operational safe zone around the site in order to prevent the commencement of operations in the event that sensitive receptors (pinnipeds and cetaceans) are observed within this perimeter. Noise-producing activities shall only commence in daylight hours with effective visual monitoring. Where effective visual monitoring is not possible, the sound-producing activities shall be postponed until effective visual monitoring is possible. The plan includes that works will be undertaken in accordance with the appropriate NPWS guidance, maintenance of appropriate buffer zones prior to works including up to 1000m from piling activities, ramping up of noise generating activities, cessation of works if relevant species are within 50m and reporting of such events to NPWS.

I am satisfied that these measures are best practice and will be effective and will ensure that there is no risk of direct injury and no significant adverse noise impact to grey seal and harbour seal.

Harbour porpoise:

As per mitigation of Rockabill to Dalkey SAC (as above). I am satisfied that these measures are best practice and will be effective and will ensure that there is no risk of direct injury and no significant adverse noise impact to marine mammals including the qualifying interest of this site.

**Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Lambay Island SAC. Indirect impacts (water quality deterioration and underwater noise disturbance) would be temporary in nature and mitigation measures are described to mitigate impact on reefs and harbour porpoise in the form of a (i) turbidity monitoring and dredging control and implementation of the CEMP and SWMP (ii) noise mitigation plan. I am satisfied that the mitigation measure proposed to disturbance effects have been assessed as effective and can be implemented and conditioned if permission is granted.

**Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects

**Site Integrity**

The proposed development will not affect the attainment conservation objectives of the Lambay Island SAC. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

**Lambay Island SPA (004069):**

(9.3km north-east of the Marine Outfall)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Airborne noise / disturbance
- (ii) Hydrological (water quality and habitat deterioration)
- (iii) Habitat loss

See Table 4.1 of the revised NIS and AA screening matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Fulmar	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size: stable or increasing;</li> <li>- Productivity rate: stable or increasing.</li> <li>- Distribution: Sufficient availability of suitable nesting sites;</li> <li>- Forage spatial distribution: sufficient number of locations, area of suitable habitat and availability;</li> <li>- Disturbance: levels not to significantly impact on breeding population or population's access to the SPA or other important sites;</li> <li>- Barriers to connectivity - number, location, shape and area of barriers do not significantly impact access to site or other sites outside the SPA.</li> </ul>	<p>See sections 6.1.3.6, 6.2.4.12 &amp; 6.4.5.6 of the revised NIS.</p> <p><u>Noise &amp; disturbance:</u> There are no airborne noise or visual disturbance impacts as a result of works in the subsea environment that will result in effects to SCI species inside this SPA due to the distance between this SPA and the proposed GDD project.</p> <p>Airborne noise impacts are restricted to the areas where piling will be carried out (within 100m) at the microtunnelling /subsea interface and fibre optic cable crossing, over area of 3ha &amp; 4 week period.</p> <p>Visual disturbance impacts could occur from vessels involved in constructing the outfall pipeline and may contribute to the potential for disturbance of birds on the water, in addition to visual disturbance.</p>	<p>No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities associated with all elements of the projects.</p>
Cormorant	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size: stable or increasing;</li> <li>- Productivity rate: no significant decline.</li> <li>- Distribution - Sufficient availability of suitable nesting sites.</li> <li>- Forage spatial distribution, extent, abundance &amp; availability</li> <li>- Sufficient number of locations, area of suitable habitat and available biomass;</li> <li>- Disturbance at site &amp; areas ecologically connected areas—at levels not to significantly impact;</li> <li>- Barriers to connectivity - do not significantly impact access to</li> </ul>	<p><u>Water quality and habitat deterioration</u> during construction: pollution incidents and elevated suspended sediments arising from dredging or piling plume originating from the outfall pipeline corridor. During operation, the operational plume could also result Water quality and habitat deterioration. These impact pathways are judged to</p>	

	site or other ecologically important sites outside the SPA.	produce highly localised effects and/or produce no/imperceptible impact and do distance to the SPA there will be no impact /imperceptible impact on the SPA.	
Shag	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size – stable or increasing;</li> <li>- Spatial distribution - Sufficient to maintain population.</li> <li>- Distribution - Sufficient availability of suitable nesting sites.</li> <li>- Forage spatial distribution, extent, abundance &amp; availability - Sufficient number of locations, area of suitable habitat and available biomass.</li> <li>- Disturbance at site &amp; areas ecologically connected areas—at levels not to significantly impact.</li> <li>- Barriers to connectivity - barriers do not significantly impact access to site or other ecologically important sites outside the SPA.</li> </ul>	<p>With regard to <u>habitat loss</u> impact pathway: Herring gull and lesser black-backed gull was recorded at the proposed micro-tunnelling compounds, the revised NIS states that it is highly likely that the birds in question were unlikely to have originated from this SPA due to the distance between it and the proposed GDD project. No impact on SCI species of this SPA arises.</p>	
Greylag Goose	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Winter population: stable or increasing;</li> <li>- Spatial distribution - Sufficient number of locations, area and availability of suitable habitat.</li> <li>- Disturbance at wintering site—at levels not to significantly impact;</li> <li>- Barriers to connectivity - do not significantly impact access to site or other ecologically important sites outside the SPA.</li> <li>- Forage spatial distribution, extent &amp; abundance: Sufficient number of locations, area of suitable habitat and available biomass;</li> <li>- Roost spatial distribution &amp; extent: Sufficient number of locations, area and availability of suitable roosting habitat.</li> <li>- Supporting habitat: sufficient area of utilisable habitat available in ecologically important sites outside the SPA.</li> </ul>		

Lesser Black-backed gull	<p>Maintain favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size: stable or increasing;</li> <li>- Productivity rate: stable or increasing.</li> <li>- Forage spatial distribution, extent, abundance &amp; availability <ul style="list-style-type: none"> <li>- Sufficient number of locations, area of suitable habitat and available biomass;</li> </ul> </li> <li>- Disturbance at site &amp; areas ecologically connected areas—at levels not to significantly impact;</li> <li>- Barriers to connectivity - do not significantly impact access to site or other ecologically important sites outside the SPA.</li> </ul>		
Herring gull	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population &amp; winter population: stable or increasing;</li> <li>- Productivity rate: stable or increasing.</li> <li>- Distribution - Sufficient availability of suitable nesting sites.</li> <li>- Winter spatial distribution-sufficient no. of locations, area and availability of suitable habitat.</li> <li>- Forage spatial distribution, extent, abundance &amp; availability <ul style="list-style-type: none"> <li>- Sufficient number of locations, area of suitable habitat and available biomass;</li> </ul> </li> <li>- Disturbance at site &amp; areas ecologically connected areas—at levels not to significantly impact;</li> <li>- Winter roost: sufficient number of locations, area and availability.</li> <li>- Supporting winter habitat: sufficient area available.</li> <li>- Barriers to connectivity - do not significantly impact access to site or other ecologically important sites outside the SPA.</li> </ul>		
Kittiwake	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size: stable or increasing;</li> </ul>		

	<ul style="list-style-type: none"> <li>- Productivity rate: stable or increasing.</li> <li>- Distribution - Sufficient availability of suitable nesting sites.</li> <li>- Forage spatial distribution, extent, abundance &amp; availability <ul style="list-style-type: none"> <li>- Sufficient number of locations, area of suitable habitat and available biomass;</li> </ul> </li> <li>- Disturbance at breeding site &amp; areas ecologically connected areas— at levels not to significantly impact;</li> <li>- Barriers to connectivity - do not significantly impact access to site or other ecologically important sites outside the SPA.</li> </ul>		
Guillemot	<p>Maintain favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size: stable or increasing;</li> <li>- Productivity rate: stable or increasing.</li> <li>- Distribution - Sufficient availability of suitable nesting sites.</li> <li>- Forage spatial distribution, extent, abundance &amp; availability <ul style="list-style-type: none"> <li>- Sufficient number of locations, area of suitable habitat and available biomass;</li> </ul> </li> <li>- Disturbance at site &amp; areas ecologically connected areas— at levels not to significantly impact;</li> <li>- Barriers to connectivity - do not significantly impact access to site or other ecologically important sites outside the SPA.</li> </ul>		
Razorbill	<p>Maintain favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size: stable or increasing;</li> <li>- Productivity rate: stable or increasing.</li> <li>- Distribution - Sufficient availability of suitable nesting sites.</li> <li>- Forage spatial distribution, extent, abundance &amp; availability <ul style="list-style-type: none"> <li>- Sufficient number of locations, area of suitable habitat and available biomass;</li> </ul> </li> <li>- Disturbance at site &amp; areas ecologically connected areas—</li> </ul>		

	<p>at levels not to significantly impact;</p> <ul style="list-style-type: none"> <li>- Barriers to connectivity - do not significantly impact access to site or other ecologically important sites outside the SPA.</li> </ul>		
Pufin	<p>Restore favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population size: stable or increasing;</li> <li>- Productivity rate: stable or increasing.</li> <li>- Distribution - Sufficient availability of suitable nesting sites.</li> <li>- Forage spatial distribution, extent, abundance &amp; availability</li> <li>- Sufficient number of locations, area of suitable habitat and available biomass;</li> <li>- Disturbance at site &amp; areas ecologically connected areas— at levels not to significantly impact;</li> <li>- Barriers to connectivity - do not significantly impact access to site or other ecologically important sites outside the SPA.</li> </ul>		
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p>(i) <b>Airborne noise / disturbance during operation</b>  Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA. Connectivity to other ecologically important sites, there is no potential for connectivity between the Lambay Island SPA and the terrestrial and subtidal habitats in the vicinity of Baldoyle Bay due to distance from the SPA. No birds would be lost from the Lambay Island SPA population as a result of the above impact pathway.  <b>Mitigation measures:</b> Not required</p> <p>(ii) <b>Hydrological impact (water quality and habitat deterioration) during construction and operation</b>  These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised. Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the revised NIS.</p>			



**Mitigation measures:** None required beyond implementation of the CEMP and surface water management plan.

**(iii) Habitat loss**

No SCI species of this SPA will be impacted as a result of habitat loss.

**Mitigation measures:** None required.

**Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site. The applicant determined that the conservation objectives of this SPA will be unaffected and there is no adverse effect on the integrity of the site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Lambay Island SPA. No direct or indirect impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.

**Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects

**Site Integrity**

The proposed development will not affect the attainment conservation objectives of the Lambay Island SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

**Dalkey Islands SPA (004172):**

(14.9km south of the Marine Outfall)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

- (i) Airborne noise / disturbance
- (ii) Hydrological (water quality and habitat deterioration)
- (iii) Habitat loss

See Table 4.1 of the revised NIS and AA Screening Matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Roseate Tern	To restore the favourable conservation condition. - Population: stable or increasing. - Distribution: sufficient availability of suitable roosting resources.	Possible <b>disturbance</b> or displacement of SCI species inside and outside the SPA as a result of construction stage activities: Noise sources will not extend into this SPA. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.	No further mitigation is required other than the implementation of the CEMP and surface water management plan for
Common Tern			
Arctic Tern			

	<ul style="list-style-type: none"> <li>- Forage distribution: sufficient suitable habitat.</li> <li>- Disturbance at roosting site: levels that do not significantly impact.</li> <li>- Disturbance at ecologically connected areas: levels that do not significantly impact.</li> <li>- Barriers that do not significantly impact the population's access to the SPA or important areas.</li> </ul>	<p>Potential for connectivity between this SPA and surrounding habitats in and adjacent to micro-tunnelling/interface is considered in the revised NIS to be highly remote due to distance.</p> <p>Re <b>deterioration of water quality</b> in the SPA from construction and operational sediment and/or pollution plumes resulting in change in foraging potential: These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised.</p> <p>With regard to <b>habitat loss</b> impact pathway: No SCIs of this SPA were recorded within habitats where the microtunnelling compounds will be constructed. No impact on SCI species of this SPA arises.</p>	<p>construction activities associated with all elements of the projects.</p>
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p>(i) <b>Airborne noise / disturbance during operation</b> Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA. <b>Mitigation measures:</b> Not required</p> <p>(ii) <b>Hydrological impact (water quality and habitat deterioration) during construction and operation</b> These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised. Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the revised NIS.</p> <p><b>Mitigation measures:</b> None required beyond implementation of the CEMP and surface water management plan.</p>			

<p><b>(iii) Habitat loss</b>  No SCI species of this SPA will be impacted as a result of habitat loss.  <b>Mitigation measures:</b> None required.</p>			
<p><b>Findings and conclusions</b>  The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site. The applicant determined that the conservation objectives of this SPA will be unaffected and there is no adverse effect on the integrity of the site.</p> <p>Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Dalkey Island SPA. No direct or indirect impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.</p>			
<p><b>Reasonable scientific doubt</b>  I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects</p>			
<p><b>Site Integrity</b>  The proposed development will not affect the attainment conservation objectives of the Dalkey Island SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.</p>			
<p><b>Skerries Island SPA (004172):</b>  (This SPA lies 16.7km north of the proposed project)</p> <p><b>Summary of Key issues that could give rise to adverse effects (from screening stage):</b></p> <ul style="list-style-type: none"> <li>(i) Airborne noise / disturbance</li> <li>(ii) Hydrological (water quality and habitat deterioration)</li> <li>(iii) Habitat loss</li> </ul> <p>See Table 4.1 of the revised NIS and AA Screening Matrix above</p>			
<b>Qualifying Interest features likely to be affected</b>	<b>Conservation Objectives Targets and attributes</b>	<b>Potential adverse effects</b>	<b>Mitigation required?</b>
Cormorant	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population &amp; winter population: stable or increasing.</li> <li>- Productivity rate: stable or increasing.</li> <li>- Distribution: sufficient availability of suitable nesting sites.</li> <li>- Winter spatial distribution: sufficient number of locations, area and availability.</li> </ul>	<p>Possible <b>disturbance</b> or displacement of SCI species inside and outside the SPA as a result of construction stage activities: Noise sources will not extend into this SPA. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.</p> <p>Potential for connectivity between this SPA and</p>	<p>No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities associated with</p>

	<ul style="list-style-type: none"> <li>- Forage spatial distribution: sufficient suitable habitat.</li> <li>- Disturbance at breeding or wintering sites: levels that do not significantly impact.</li> <li>- Disturbance at ecologically connected areas: levels that do not significantly impact.</li> <li>- Winter roost extent: sufficient area and suitable habitat.</li> <li>- Sufficient area of supporting winter habitat outside SPA.</li> <li>- Barriers that do not significantly impact the population's access to the SPA or important areas.</li> </ul>	<p>surrounding habitats in and adjacent to outfall corridor is considered in the revised NIS to be remote.</p> <p>Re <b>deterioration of water quality</b> in the SPA from construction and operational sediment and/or pollution plumes resulting in change in foraging potential: These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised.</p> <p>Re <b>habitat loss</b> impact pathway: Herring gull was recorded at the proposed micro-tunnelling compounds. Given the distance from this SPA, it is unlikely that these birds came from this SPA. The temporary habitat loss could result in a temporary redistribution of a small number of birds. No impact on SCI species of this SPA arises.</p>	all elements of the projects.
Shag	<p>To restore the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Breeding population: stable or increasing.</li> <li>- Productivity rate: stable or increasing.</li> <li>- Distribution: sufficient availability of suitable nesting sites.</li> <li>- Forage spatial distribution: sufficient suitable habitat.</li> <li>- Disturbance at breeding or wintering sites: levels that do not significantly impact.</li> <li>- Disturbance at ecologically connected areas: levels that do not significantly impact.</li> <li>- Barriers that do not significantly impact the population's access to the SPA or important areas.</li> </ul>		
Light-bellied Brent Goose	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Winter population: stable or increasing.</li> <li>- Winter spatial distribution: sufficient number of locations, area and availability.</li> <li>- Disturbance at wintering sites: levels that do not significantly impact.</li> </ul>		

	<ul style="list-style-type: none"> <li>- Barriers that do not significantly impact the population's access to the SPA or important areas.</li> <li>- Forage distribution &amp; extent: sufficient area.</li> <li>- Roost distribution &amp; extent: sufficient area.</li> <li>- Sufficient area of supporting winter habitat outside SPA.</li> </ul>		
Purple Sandpiper	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Winter population: stable or increasing.</li> <li>- Winter spatial distribution: sufficient number of locations, area and availability.</li> <li>- Disturbance at wintering sites: levels that do not significantly impact.</li> <li>- Barriers that do not significantly impact access to the SPA or important areas.</li> <li>- Forage distribution &amp; extent: sufficient area.</li> <li>- Roost distribution &amp; extent: sufficient area.</li> <li>- Sufficient area of supporting winter habitat outside SPA.</li> </ul>		
Turnstone	<p>To maintain the favourable conservation condition.</p> <ul style="list-style-type: none"> <li>- Winter population: stable or increasing.</li> <li>- Winter spatial distribution: sufficient number of locations, area and availability.</li> <li>- Disturbance at wintering sites: levels that do not significantly impact.</li> <li>- Barriers that do not significantly impact access to the SPA or important areas.</li> <li>- Forage distribution &amp; extent: sufficient area.</li> <li>- Roost distribution &amp; extent: sufficient area.</li> <li>- Sufficient area of supporting winter habitat outside SPA.</li> </ul>		
Herring Gull	<p>To restore the favourable conservation condition.</p>		

	<ul style="list-style-type: none"> <li>- Breeding population: stable or increasing.</li> <li>- Productivity rate: stable or increasing.</li> <li>- Winter population trend: stable or increasing.</li> <li>- Distribution: sufficient nesting sites.</li> <li>- Winter distribution: sufficient locations, area and availability.</li> <li>- Forage distribution &amp; extent: sufficient area.</li> <li>- Disturbance at breeding or wintering sites: levels that do not significantly impact.</li> <li>- Disturbance levels that do not significant impact on ecologically connected areas.</li> <li>- Roost distribution &amp; extent: sufficient area.</li> <li>- Sufficient area of supporting winter habitat outside SPA.</li> <li>- Barriers that do not significantly impact access to the SPA or important areas.</li> </ul>		
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p><b>(iv) Airborne noise / disturbance during operation</b>  Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.</p> <p><b>Mitigation measures:</b> Not required</p> <p><b>(v) Hydrological impact (water quality and habitat deterioration) during construction and operation</b>  These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised. Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the revised NIS.</p> <p><b>Mitigation measures:</b> None required beyond implementation of the CEMP and surface water management plan.</p> <p><b>(vi) Habitat loss</b></p>			

No SCI species of this SPA will be impacted as a result of habitat loss.

**Mitigation measures:** None required.

#### Findings and conclusions

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site. The applicant determined that the conservation objectives of this SPA will be unaffected and there is no adverse effect on the integrity of the site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Skerries Island SPA. No direct impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.

#### Reasonable scientific doubt

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects

#### Site Integrity

The proposed development will not affect the attainment conservation objectives of the Skerries island SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

#### Rockabill SPA (004014):

(This SPA lies 16.9 km north of the marine outfall)

#### Summary of Key issues that could give rise to adverse effects (from screening stage):

- (i) Airborne noise / disturbance
- (ii) Hydrological (water quality and habitat deterioration)
- (iii) Habitat loss

See Table 4.1 of the revised NIS and AA Screening matrix above

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Purple Sandpiper	To maintain the favourable conservation condition. <ul style="list-style-type: none"> <li>- Population: stable or increasing.</li> <li>- Distribution: no significant decrease.</li> </ul>	Possible disturbance or displacement of SCI species inside and outside the SPA as a result of construction stage activities: Noise sources will not extend into this SPA. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.	No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities
Roseate Tern	To maintain the favourable conservation condition. <ul style="list-style-type: none"> <li>- Breeding population: no significant decline.</li> </ul>	Potential for connectivity between this SPA and	

	<ul style="list-style-type: none"> <li>- Productivity: no significant decline.</li> <li>- Distribution: no significant decline.</li> <li>- Prey: no significant decline.</li> <li>- Barriers: no significant increase.</li> <li>- Disturbance at breeding site: levels that do not adversely affect the breeding population.</li> </ul>	<p>surrounding habitats in and adjacent to micro-tunnelling/interface is considered in the revised NIS to be remote due to distance.</p> <p>Re deterioration of water quality in the SPA from construction and operational sediment and/or pollution plumes resulting in change in foraging potential: These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised.</p> <p>With regard to habitat loss impact pathway: No SCIs of this SPA were recorded within habitats where the microtunnelling compounds will be constructed. No impact on SCI species of this SPA arises.</p>	associated with all elements of the projects.
Common Tern			
Arctic Tern			

The above table is based on the documentation and information provided on the file and I am satisfied that the submitted revised NIS has identified the relevant attributes and targets of the Qualifying Interests.

Assessment of issues that could give rise to adverse effects:

**(vii) Airborne noise / disturbance during operation**

Noise sources will not extend into this SPA at sufficient magnitude to potentially trigger disturbance within the SPA boundary. Visual disturbance distances indicate that these impacts will not occur at or near this SPA.

**Mitigation measures:** Not required

**(viii) Hydrological impact (water quality and habitat deterioration) during construction and operation**

These impact pathways are judged to produce highly localised effects and/or produce no/imperceptible impact, due to distance from the marine outfall, the conservation objectives for the SCIs of this SPA are not compromised. Potential for connectivity between this SPA and surrounding habitats in and adjacent to the outfall pipeline corridor are considered remote in the revised NIS.

**Mitigation measures:** None required beyond implementation of the CEMP and surface water management plan.

**(ix) Habitat loss**

No SCI species of this SPA will be impacted as a result of habitat loss.

**Mitigation measures:** None required.



**Findings and conclusions**

The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site. The applicant determined that the conservation objectives of this SPA will be unaffected and there is no adverse effect on the integrity of the site.

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Rockabill SPA. No direct impacts are predicted. No further mitigation is required other than the implementation of the CEMP and surface water management plan for construction activities. I am satisfied that the mitigation measure proposed to prevent water quality deterioration have been assessed as effective and can be implemented and conditioned if permission is granted.

**Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

**Site Integrity**

The proposed development will not affect the attainment conservation objectives of the Rockabill SPA. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

**Codling Fault Zone SAC (003015):**

(ca 25km to the east)

**Summary of Key issues that could give rise to adverse effects (from screening stage):**

- Underwater noise / disturbance
- Hydrological (water quality and habitat deterioration)

The Conservation Objectives for Codling Fault Zone SAC was updated in January 2025 to include an additional Qualifying Interest (QI), Harbour Porpoise *Phocoena phocoena* (1351). As the addition of this QI occurred after the submission of the revised NIS by the applicant, this QI for this SAC was not assessed in the revised NIS. This QI has been assessed by the Inspectorate Marine Ecologist, refer to attached report, appendix 5. and informs this AA.

Qualifying Interest features likely to be affected	Conservation Objectives Targets and attributes	Potential adverse effects	Mitigation required?
Submarine structure made by leaking gases	To maintain the favourable conservation condition	None – due to distance from and nature of work	No
Harbour Porpoise	To maintain the favourable conservation condition.  Access to site: species range within the site	The effect on harbour porpoise due to <u>water quality and habitat deterioration</u> impacts could occur due to the plume from dredging. This is predicted to result in elevated suspended sediment above 5mg/l over 4.5 km <sup>2</sup> (1.5 km <sup>2</sup> is within SAC). This is 0.55% of the total SAC and the duration of dredging is expected to be 60 days. The	Yes, mitigation required, see section 7.4 of the revised NIS

	<p>should not be restricted by artificial barriers to site use.</p> <p>Disturbance: human activities should occur at levels that do not adversely affect the HP community at the site</p>	<p>plume would have a localised temporary impact on the foraging behaviour of the harbour porpoise due to reduced visibility in the vicinity of the dredging. The species has a large foraging range and in addition is not averse to inhabiting high turbidity waters.</p> <p>From <b>discharge plume – operational stage</b>. The concentration of suspended sediments is predicted during the operational phase to be below that detectable by this Annex II species and no impact to this qualifying species is expected.</p> <p><u>Underwater noise and disturbance</u>-expected noise levels due to dredging will not be sufficient to cause any damage but is likely to induce avoidance behaviour prior to entering the area of the discharge plume. The noise created by the piling was higher and above the temporal threshold shift (TTS) for the harbour porpoise when in close proximity to the source.</p> <p>Any disruption to benthos during construction of the outfall pipe will be temporary, save for the diffuser. The diffuser is not expected to create a <u>habitat loss</u> to the harbour porpoise and could create pibenthic faunal assemblages to the site, attracting prey species for the harbour porpoise. During operation, it is expected that the plume will visibly be imperceptible to porpoises within 50-100m of the diffuser; it may enhance plankton productivity which may encourage feeding from prey species in the vicinity, but the impact of this is expected to be negligible.</p>	
<p>The above table is based on the documentation and information provided on the file and I am satisfied that the submitted revised NIS has identified the relevant attributes and targets of the Qualifying Interests.</p> <p>Assessment of issues that could give rise to adverse effects:</p> <p><b>(i) Water quality and habitat deterioration (construction and operation)</b></p> <p><u>Harbour Purpose:</u></p> <p>I refer to the report prepared by Conor Donnolly, Inspectorate Marine Ecologist, attached as Appendix 5 to this Inspector's Report. The project outfall occurs within the boundaries of the Rockabill to Dalkey Island SAC whereas Codling Fault Zone SACs is c.25km from it. The Conservation Objectives Supporting Documents for the SAC state that no detailed information is available on individual or group movements by Harbour Porpoise within or into/out of the sites however, as a highly mobile species, the Harbour Porpoise QIs of these sites may also use habitats in proximity to the outfall. The site-specific Conservation Objectives for the Harbour Porpoise QIs are consistent across the Rockabill to Dalkey Island SAC, Lambay Island SAC and Codling Fault SAC, in that each comprises two attributes with the same measure and target set in each case. In all three SACs, the Conservation Objective for this QI is</p>			

'maintain'. Taking the above into account, the Inspectorate Marine Ecologist considers that the assessment undertaken for Harbour Porpoise as a QI of the Rockabill to Dalkey SAC is applicable to the Harbour Porpoise QIs of the Codling Fault Zone SAC. Given the highly mobile nature of Harbour Porpoise, the same impact pathways apply and in view of the Conservation Objectives for this QI in each SAC, the same conclusions can be reached with regards no adverse effects on site integrity from this project alone and in combination and that there is no reasonable doubt remaining as to the absence of such effects.

Refer to assessment above in respect of Rockabill to Dalkey SAC.

**Mitigation measures:**

Harbour Porpoise:

During construction, pollution incidents can be managed through CEMP implementation.

**(ii) Underwater noise and disturbance**

Harbour porpoise:

I refer to the report prepared by Conor Donnolly, Marine Ecologist, with the Board attached as Appendix 5 to this Inspector's Report. As a highly mobile species, the Harbour Porpoise QIs of these sites may also use habitats in proximity to the outfall. The revised NIS states that the overall level of dredging noise is expected to be low but is expected to induce some behavioural responses by Harbour Porpoises when in close proximity (<1km). It describes noise impacts from piling as significantly greater. In both cases it is proposed that these impacts will be addressed by mitigation.

Expected noise levels due to dredging and installation of the diffuser will not be sufficient to cause any damage but is likely to induce avoidance behaviour prior to entering the area of the discharge plume. Although the majority of these works are carried out outside the SAC, the impact pathway is open and mitigation methods are required to ensure that effects on this Annex II species do not compromise the conservation objectives for the SAC.

**Mitigation measures:**

As per mitigation of Rockabill to Dalkey SAC (above). I am satisfied that these measures are best practice and will be effective and will ensure that there is no risk of direct injury and no significant adverse noise impact to marine mammals including the qualifying interest of this site.

**Findings and conclusions**

Based on the information provided, I am satisfied that adverse effects arising from the proposed development can be excluded for the Codling Fault Zone SAC. Indirect impacts (water quality and habitat deterioration) can be managed through implementation of the CEMP and SWMP, and underwater noise and disturbance impacts would be temporary in nature and mitigated in the form of a noise mitigation plan. I am satisfied that the mitigation measure proposed to disturbance effects have been assessed as effective and can be implemented and conditioned if permission is granted.

**Reasonable scientific doubt**

I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects.

**Site Integrity**

The proposed development will not affect the attainment conservation objectives of the Codling Fault Zone SAC. Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.

### **In-combination effects with other plans and projects**

I have assessed the potential for in-combination effects based on the 4 no. impact pathways:

- airborne noise and visual disturbance,
- water quality and habitat deterioration,
- underwater noise and visual disturbance,
- habitat loss.

Projects which are relevant to the potential in-combination effects are outlined in section 6.5 of the revised NIS. Reference is also made to cumulative impacts chapter of the EIAR Addendum (Ch. 23A). I have considered these documents, Appendix A23.1 Cumulative Impact Assessment Tables, the Inspector's Report ABP-301908 and associated Oral Hearing records in preparing this in-combination assessment.

### **Pre-October 2023 (date of lodgement of further information):**

The revised NIS covers projects and plans to October 2023 (Table 6.12) and concludes that there is potential for cumulative impacts during construction arising as a result of surface water run-off during construction of several listed projects if they are under construction at the same time as the proposed project. This revised NIS states that all projects have listed 'Adherence to CEMP and implementation of effective surface water management procedures' in application documents. Similarly, the construction of the GDD project will require adherence to a CEMP and surface water management during construction and maintenance of SUDs during operation.

### **Howth Harbour Development:**

Table 6.12 of the revised NIS refers to the Howth Harbour development (ABP 314487) which entails dredging of harbour, treatment of dredged material, reclamation of land, landscape reclaimed land, construction of slipway and construction of embarkment and rock armour around reclaimed land at Howth Fishery Harbour Centre. Permission has been granted for this development. A waste licence is presently with the EPA for consideration. According to application documents, the Howth Harbour development is to take c. 24 months for construction. The revised NIS states that disturbance or displacement of QI species of European sites as a result of underwater noise or vibration could occur as there is an open pathway from this project to those marine receptor species of European sites also potentially affected by the Proposed Project. Marine mammals associated with Rockabill to Dalkey Island SAC, with Lambay Island SAC and with Codling Fault Zone SAC have therefore the potential to be disturbed if projects construction phases run simultaneously. The EIAR Addendum (i.e. Cumulative Impact Assessment Table) states that dredging activities for these two projects must be scheduled to occur at different times to mitigate against impacts on marine water quality and marine biodiversity. I note that the dredging plume associated with the GDD project has been modelled based on the disposal regime to travel northwards and that dispersal of sediment plumes from either project are unlikely to coincide. Notwithstanding, I note that the Addendum outline CEMP (page 7) states that dredging activities will be required to be scheduled to occur at different times. This will avoid any adverse cumulative impacts which may occur on marine water quality and marine mammals as a result of increased suspended sediment and underwater noise and disturbance from both projects.

On a point of clarity, the Board will note that a Howth Harbour Fishery Development, referred to in the in-combination assessment undertaken by the previous Inspector in respect of ABP-301908 relates to an earlier development than the one discussed above.

#### SHD and Racecourse Park:

The revised NIS (Table 6.12) states that disturbance or displacement of feature species of European sites as a result of airborne noise, vibration or other visual stimuli could occur if these projects, individually, were to be under construction at the same time as the proposed GDD project:

- strategic housing development (Quintain Development Ireland Ltd) for 172 no. units at Station Road, Portmarnock,

- Fingal County Council Park development project at the Racecourse Park comprising 4.5km of new walking and cycling routes between Baldoyle and Portmarnock, With respect to the Quintain Development and the Racecourse Park, the revised NIS details the mitigation measures conditioned as part of the permission/consent. I am satisfied that these measures together with the mitigation measures proposed as part of the proposed GDD project are adequate to ensure no residual effects will remain post the application of these measures. There is therefore no potential for in-combination effects from these projects on the European sites assessed as part of this AA.

#### **Post-October 2023**

As part of this assessment (post October 2023), I have reviewed recent plans and projects permitted and under consideration with relevant planning authorities. I have assessed the potential for in-combination effects based on the 4 no. impact pathways (detailed above).

I have concluded that the projects which are considered relevant to Appropriate Assessment in terms of potential for in-combination effects are:

- '3FM Project' (Dublin Port Company, ABP-320250);
- Dublin Array Offshore Windfarm (ABP-321992)
- Codling Wind Park (ABP-320768)
- Upgrades to drainage infrastructure and construction of additional drainage infrastructure at Dublin Airport (ABP 320815-23 / FCC F23A/0636A)

Other projects were discounted from further consideration due to scale and/or distance/no potential impact-receptor-pathway due to project being outside of the Zol/no temporal overlap.

#### 3FM Project

The proposed '3FM Project' consists of a Southern port access route and road network improvements, construction of a Lo-Lo container terminal, Ro-Ro freight terminal and other works, including dredging and deposition works with a construction period of 15 years.

The submitted NIS, section 4.6 deals with in-combination effects. The GDD project was not a listed project considered to have potential for in-combination effects. Both projects are located within the Rockabill to Dalkey Island SAC.

The EIAR cumulative impact assessment, Ch. 20, notes that underwater noise impacts due to 3FM Project piling have been modelled, and determined that potential impacts on marine mammals and fish are essentially confined to the inner harbour area i.e. inside the Bull Walls, with no offshore effects. The physical barriers presented by the North and South Bull Walls, the narrow harbour entrance and the shallow waters of the harbour area all combine to rapidly attenuate underwater noise propagation and limit the zone of influence to the harbour area. Mitigation is proposed in the 3FM Project to mitigate impacts in the harbour area but no impacts on marine mammals in Dublin Bay are anticipated due to 3FM Project piling. The NIS details mitigation measures to reduce noise impacts on marine mammals and will implement NPWS Guidelines (2014) during all piling operations.

There will also be no cumulative impact on benthic biodiversity and fisheries from disposal of dredged spoil by the 3FM Project. Sediment plumes have been shown to settle rapidly and within 750m of the 3FM Project dredge dump site.

The NIS states that it can be concluded that the disposal operations associated with the 3FM Project will not result in any significant increases to the background level of suspended sediments and will not, therefore, impact the existing water quality in the greater Dublin Bay, or the Annex I habitats and wetlands of the European sites in terms of suspended sediments.

The NIS concludes that there will be no adverse effects upon the integrity of any European site consequent upon the implementation mitigation measures prescribed in this NIS.

#### Dublin Array

The proposed offshore wind farm infrastructure comprises between 39-50 wind turbines and includes off-shore and on-shore infrastructure, electrical cabling and is located ca.13.5km to the south east of the proposed GDD project. The greater Dublin Drainage project is considered in the NIS, appendix D – In-Combination effects assessment matrices and long list. It was determined that there would be no temporal overlap, nor potential for sequential in-combination effect and it was screened out of assessment.

#### Codling Wind Park

This proposed offshore windfarm site comprising 60-72 turbines is located ca. 11km to the south (nearest point) and includes a generating station, interconnector cables, offshore and onshore transmission infrastructure. Appendix 5.1 of the EIAR, Cumulative Effects considers the proposed GDD project indicating that proposed cable corridor is ca. 11 km from the proposed outfall and ca. 33km from the array site. The Stage 2, NIS concluded that following application of suitable mitigation where required, the CWP Project either alone or in-combination with other plans or projects, would not have an (either ex situ or in situ) adverse effect on the integrity of any European site.

#### Dublin Airport Drainage Infrastructure Upgrades

The proposed development includes upgrades to existing drainage infrastructure and construction of additional drainage infrastructure to improve performance of surface water management system at Dublin Airport. The application included an EIAR, NIS and WFD Assessment. The site encompasses the Cuckoo Stream. The potential impact pathway is via surface water to Baldoyle Bay. An element of the scheme interacts with the proposed GDD project: the proposed design of the central pollution control facility (CPCF) incorporates a discharge to the existing north fringe sewer and includes provision for a future connection to GDD orbital sewer. The CPCF will collect and manage contaminated surface water run off from the airfield (from de-icing), from where it will be discharged to the public foul sewer for treatment by public wastewater infrastructure and is designed to protect water quality in the downstream receiving waters.

The application is currently on appeal (ABP 320815) and I note that the proposed development is intended to improve the surface water management and improve downstream water quality which will flow into Baldoyle Bay. I note the AA conclusions set out in the Fingal County Council (FCC) Planning Report, which relies on the external ecologist report prepared on behalf of FCC, who considered that the applicant has provide sufficient evidence to confirm that the construction and operation of the proposed Airfield Drainage Project will not result in direct, indirect or in-combination

effects which would adversely affect the integrity of the relevant European sites, Baldoye Bay SAC and SPA.

I note that the proposed development will be carried out in accordance with Table 13 of the NIS which specifies the mitigation measures for the potential impacts identified. This includes specific measures to address potential contamination from soil excavations and movements and to protect water courses leading to European sites from contamination. I note the conditions of permission which provides for a surface water monitoring and annual reporting. Finally, I note that discharge from the CPCF to the Uisce Éireann wastewater network and will be subject to treatment and environmental standards/compliance.

Without prejudice to any appeal decision, having regard to the information before me presently, I am satisfied that there are no in-combination adverse effects on the integrity of Baldoye Bay SAC and SPA.

### **Third- Party Submissions**

Third party submissions indicate that there is a lack of consideration given to in-combination impact of other projects such as the offshore windfarms. No reasons are provided as to why certain specified developments should be considered in the revised NIS.

An in-combination effect occurs where a residual significant effect from the proposed development could interact with similar effects from other plans and projects that affect the same site or sites. There is a potential for cumulative impacts with permitted developments in proximity to the subject site should construction times overlap. I note the limited construction period of ca. 18 months for onshore works and ca. 6 months for marine works, and that relevant permitted developments in proximity to the development site have been subject to the AA process as part of their consent procedure and where appropriate have set out mitigation measures to avoid adverse impacts on the integrity of any European site.

### **Conclusion**

I am satisfied that the in-combination effects have been assessed adequately, pre-Oct. 2023 in the revised NIS, section 6.5 of the revised NIS refers, and above as part of this Inspector's AA, for development proposals post-Oct. 2023.

One project, the Howth Harbour development, has the potential to have in-combination effects on marine water quality and marine mammal QI's of European Sites if dredging works of both projects occur simultaneously. I consider that an additional mitigation measure is necessary such as to ensure that dredging activities for these projects occur at different times. This mitigation measure is included in the schedule of conditions attached for the Board's consideration, should the Board be minded to grant permission.

I am satisfied that no significant residual effects will remain post the application of mitigation measures that could act in combination with other plans and projects to generate adverse effects on the integrity of any European Site.

### **Appropriate Assessment Conclusion: Integrity Test**

In screening the need for Appropriate Assessment, it was determined that the proposed development could result in significant effects on:

- North-West Irish Sea candidate SPA (004236)
- Baldoyle Bay SAC (000199)
- Baldoyle Bay SPA (004016)
- Rockabill to Dalkey Island SAC (003000)
- Ireland's Eye SPA (004117)
- North Dublin Bay SAC (000206)
- North Bull Island SPA (004006)
- Malahide Estuary SPA (004025)
- Malahide Estuary SAC (000205)
- Howth Head Coast SPA (004113)
- South Dublin Bay and River Tolka Estuary SPA (004024)
- Rogerstown Estuary SAC (000208)
- Rogerstown Estuary SPA (004015)
- South Dublin Bay SAC (000210)
- Lambay Island SAC (000204)
- Lambay Island SPA (004069)
- Dalkey Islands SPA (004172)
- Skerries Islands SPA (004122)
- Rockabill SPA (004014)
- Codling Fault Zone SAC (003015)

in view of the conservation objectives of those sites and that Appropriate Assessment under the provisions of S177U/ 177AE was required.

I acknowledge that the revised NIS was prepared prior to the updating/addition of QI's for Lambay Island and Codling Fault Zone SAC and prior to the updating of Conservation Objectives for several sites. Site specific conservation objectives exist for all screened-in European designated sites. I have had regard to the most recent data on the NPWS website and to an up to date in-combination assessment in preparing this AA. This AA has been informed having regard to specialists' reports prepared by

- Emmet Smyth (Inspectorate Scientist) Specialist report No. 1
- Dr. Antony Knights (Consultant Marine Ecologist) Specialist Report No. 2 and
- Conor Donnelly (Inspectorate Marine Ecologist) Specialist Report No. 3.

I am satisfied that all aspects of the project which could result in significant effects are considered and assessed in the revised NIS and/or the additional documents (i.e Specialists' Reports) referred to above. In addition mitigation measures designed to avoid or reduce any adverse effects on site integrity have been included and assessed for effectiveness.

Following an examination, analysis and evaluation of the revised NIS, all associated material submitted i.e., further information, the Oral Hearing and Specialists' Reports and taking into account observations of the DAU on behalf of the Department of Housing, Local Government and Heritage, I consider that adverse effects on site integrity of these sites can be excluded in view of the conservation objectives of these sites and that no reasonable scientific doubt remains as to the absence of such effects.

My conclusion is based on the following:

- Detailed assessment of construction and operational impacts and
- The effectiveness of mitigation measures proposed as detailed in section 7.0 of the Revised NIS and they relate to:
- North-West Irish Sea candidate SPA in respect of guillemot and razorbill;



- Baldoyle Bay SAC in respect of mudflats and sandflats not covered by seawater at low tide;
- Baldoyle Bay SPA in respect of brent goose;
- Rockabill to Dalkey Island SAC in respect of reefs and harbour porpoise;
- Ireland's Eye SPA in respect of guillemot and razorbill;
- Lambay Island SAC in respect of harbour porpoise, grey seal and harbour seal, and;
- Implementation of the outline CEMP and Surface Water Management Plan in respect of hydrological impact pathway across several designated sites.
- Application of planning conditions to ensure application of these measures.
- The proposed development will not affect the attainment of conservation objectives for these sites or any other designated site or prevent or delay the restoration of favourable conservation condition for any designated site.

**This page is intentionally left blank**

### **Appendix 3**

#### **Specialist Report No. 1, Mr. Emmet Smyth, Inspectorate Scientist**

**This page is intentionally left blank**

## **Appendix 4**

**Specialist Report No. 2, Dr. Antony Knights, Consultant Marine Ecologist**

**This page is intentionally left blank**

## **Appendix 5**

**Specialist Report No. 3, Mr. Conor Donnelly, Inspectorate Marine Ecologist**

**This page is intentionally left blank**