



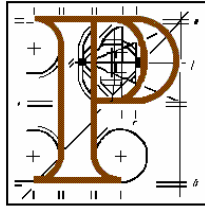
ATTACHMENT B.3:
PLANNING DOCUMENTATION



ATTACHMENT B.3.1:

AN BORD PLEANÁLA PLANNING APPROVAL, NOVEMBER 2012

An Bord Pleanála



PLANNING AND DEVELOPMENT ACTS 2000 to 2011

An Bord Pleanála Reference Number: 29N.YA0010

Dublin City Council

APPLICATION by Dublin City Council for approval under section 226 of the Planning and Development Act 2000, as amended, in accordance with plans and particulars, including an Environmental Impact Statement and Natura Impact Statement, lodged with the Board on the 13th day of April, 2012.

PROPOSED DEVELOPMENT: Ringsend Wastewater Treatment Works Extension Project which will expand the existing wastewater treatment works at Pigeon House Road, Ringsend, Dublin to its ultimate capacity within the confines of its current site and achieve the required discharge standards. The proposed extension includes the following elements of works:

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

DECISION

GRANT approval for the above proposed development in accordance with the said plans and particulars based on the reasons and considerations under and subject to the conditions set out below.

MATTERS CONSIDERED

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.

REASONS AND CONSIDERATIONS

In coming to its decision, the Board had regard to the following:

- (a) The discharge standards set out in the Water Framework Directive (2000/60/EC), the Urban Wastewater Treatment Regulations (SI 254 of 2001), the Bathing Water Regulations (SI 79 of 2008) and the Surface Water Regulations (SI 272 of 2009).
- (b) The discharge licence granted by the Environmental Protection Agency to Ringsend Wastewater Treatment Plant under licence number (D00-34-01) and the Emission Limit Values therein.
- (c) The current performance of the existing wastewater treatment plant and the need to improve discharge standards from same, to meet water quality standards for bathing waters, coastal waters, transitional waters and designated sensitive waters in Dublin Bay in accordance with the requirements set out under the Water Framework Directive (2000/60/EC).
- (d) The policies, provisions and objectives set out in the Greater Dublin Strategic Drainage Study, 2005, the Regional Planning Guidelines for the Greater Dublin Area 2010-2022 and the Dublin City Development Plan 2011-2017, all of which have an objective to expand the existing wastewater treatment facility at Ringsend to its ultimate capacity, as well as the provision for another regional plant.
- (e) The demonstrated need for increased capacity at this location, notwithstanding being part of an overall programme for increasing sewerage capacity in the Greater Dublin Area.
- (f) The site's location on the Poolbeg Peninsula, remote from residential development and the pattern of development in the vicinity of the site.
- (g) The nature, scale and design of the proposed development.
- (h) The documents, including the environmental impact statement and natura impact statement accompanying the application, and the submissions on file generally, which the Inspector and the Board examined, analysed and evaluated.

- (i) The objections made to the proposed development.
- (j) The report of the Inspector, who held the oral hearing.

The Board conducted an Environment Impact Assessment and concluded that, subject to compliance with the conditions set out below, the proposed development would not adversely impact upon the environment. The Board considered that the proposed development would be likely to enhance the quality of water in Dublin Bay, which in turn, would improve its amenity value and ecology.

The Board completed an Appropriate Assessment of potential impacts of the proposed development on the South Dublin Bay and River Tolka Estuary Special Protection Area, the North Bull Island Special Protection Area, the Howth Head Coast Special Protection Area, the South Dublin Bay Special Area of Conservation, the North Dublin Bay Special Area of Conservation and the Howth Head Special Area of Conservation and other nearby European sites. Taking into account the natura impact statement submitted and the Inspector's assessment, the Board concluded that, on the basis of the information available, the proposed development, either individually or in combination with other plans or projects, would not adversely impact on the integrity of designated Natura 2000 Sites in Dublin Bay in view of the conservation objectives for the site.

The proposed development would facilitate the planned growth of the Greater Dublin Area. It is considered that, subject to compliance with the conditions set out below, the proposed development would not seriously injure the amenities of the area or of property in the vicinity, would be acceptable in terms of traffic, noise, odour and water quality, and would, therefore, be in accordance with the proper planning and sustainable development of the area.

CONDITIONS

General

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application and the information contained in the environmental impact statement, including all mitigation measures contained therein, as amended by the further plans and particulars submitted at the oral hearing, except as may otherwise be required in order to comply with the following conditions.

Reason: In the interest of clarity.

Operation

2. The proposed development shall be constructed to a standard capable of complying with the following treated maximum effluent values:

Biochemical Oxygen Demand – 25mg/l

Total Suspended Solids – 35 mg/l

Reason: In the interest of clarity and to comply with the requirements of the Urban Wastewater Treatment Regulations (S.I. No. 254 of 2001).

3. The odour emanating from the site shall not exceed 10 O_U E/mg² at the 98 percentile for hourly averages for more than 50 hours per year at the site boundary.

Reason: In the interest of the amenities of the surrounding area.

4. Dust levels at the site boundary shall not exceed 350 mg/m²/day averaged over a continuous period of 30 days. A monthly survey and monitoring programme of dust and particulate emissions shall be undertaken to provide for compliance with these limits.

Reason: To control dust emissions arising from the development and in the interest of the amenities of the area.

Construction Phase

5. A construction stage environmental management plan (CSEMP), including all construction method statements, shall be prepared by the developer and implemented by the contractor. The developer shall retain responsibility for overseeing, updating and enforcing the construction environmental management plan. The construction environmental management plan shall adhere to the following requirements:
 - (a) All preventative and management measures to be applied throughout the construction phase shall be set out so that all potential impacts are minimised, mitigated, or avoided.
 - (b) All measures to be employed in relation to spill contingencies, spoil disposal, management of contaminated soil, the selection of slurry additives and drilling fluids.

- (c) Measures set out in the Construction Industry Research and Information Association (CIRIA) on the control and management of water pollution from construction sites shall be adhered to.
- (d) All fuels or chemicals kept on the construction site shall be stored in bunded containers. All refuelling and maintenance of vehicles and equipment shall be carried out in designated containment areas away from sensitive environments.
- (e) Any waste or hazardous waste residuals or potentially contaminated sludge from spill clean-up shall be stored in appropriate receptacles or containers, or in bunded storage areas prior to their removal by the developer or EPA licenced contractor.
- (f) Any discharges arising from the construction phase shall incorporate silt removal and hydrocarbon removal using a hydrocarbon interceptor.
- (g) Weekly monitoring of the water quality being discharged off the site shall take place during the construction phase.
- (h) Foul sewage shall be transported off site and disposed of by discharging to a licenced sewer network.
- (i) All marine vessel waste generated during the pipeline survey, and any maintenance vessels including marine rigs, shall accord with relevant guidelines including those guidelines from Annex V of the International Convention for the Prevention of Pollution from Ships, as amended. All hazardous waste stored on ships shall be contained in sealed labelled containers and stored in lockable container cabinets. A record of all types and quantities of waste arising on each vessel shall be kept.
- (j) The Guidelines entitled 'Requirements for the Protection of Fisheries Habitats during Construction and Development Works at River Sites' prepared by the Eastern Regional Fisheries Board shall be adhered to in full.
- (k) Management proposals and monitoring protocols for areas of ecology, archaeology, water quality management (both ground and surface), dust management, noise management, traffic management, sediment control, spoil disposal, general pollution control, community liaison, hazardous substance management, environmental training and supervision for personnel.
- (l) Details of the management of all landscaping within the sites and, where appropriate, in the vicinity of the site.

- (m) Details of site managers, contact numbers (including out of hours) and public information signs (including warning signs) at the entrance and, where appropriate, at the boundaries of the site.
- (n) Details of a pest control plan.
- (o) Staff parking shall not be permitted in the public car park in the vicinity of the site and suitable car parking places shall be provided elsewhere.

Upon the commencement of construction, the CSEMP will be reviewed according to a regular timeframe and will be updated if necessary. Environmental auditing will be undertaken to ensure compliance with the CSEMP.

Reason: In the interest of the protection of the environment during the construction phase.

6. Where blasting is to take place during the construction works for both the inlet tunnel shaft, or in the case of the wastewater treatment works extension, ground vibrations shall not exceed twelve millimetres per second peak particle velocity (when measured in any one of the three mutually orthogonal plains) for any blast when measured at the nearest vibration sensitive location. If blasting occurs more than once a week, ground vibration shall not exceed eight millimetres per second peak particle velocity (when measured in any one of three mutually orthogonal plains) for any blast when measured at the nearest vibration sensitive location.

The air over-pressure from any blast shall not exceed the value of 125 B(lin) maximum peak with a 95% confidence. No individual air over pressure value shall exceed the limit value by more than 5 dB (Lin).

A monitoring programme, which shall include reviews to be undertaken at monthly intervals, shall be developed to assess the impact of the blasts.

Reason: In the interest of public safety and residential amenity.

7. Underwater noise levels shall be monitored in accordance with a monitoring plan drawn up following consultation with the National Parks and Wildlife Service during the construction period.

Reason: To ensure the protection of marine mammals and other marine fauna.

8. During the construction of the diffuser shaft, a suitably qualified marine ecologist shall be present on the marine construction rig so as to ensure that no cetaceans are within the 100 meter exclusion zone of the rig during the commencement of drilling operations. Where such marine fauna are present within the exclusion zone, drilling operation will be suspended until such time as the fauna leave the exclusion zone.

Reason: To ensure the protection of cetaceans.

9. Appropriate reinstatement of all landscaping, earthworks, boundaries and access arrangements shall take place following construction phase and a landscaping scheme implemented in the first planting season following completion of works. Works shall include the dismantling of all temporary construction works and removal of all equipment and other temporary infrastructure on site.

Reason: In the interest of visual amenity.

10. A comprehensive method statement relating to the installation of the underground electricity supply cables and road improvement works shall be prepared prior to the commencement of works. Works on the existing compensatory grassland shall not be undertaken during the winter period (September 1st to April 30th inclusive).

Reason: In the interest of orderly development and to ensure that the potential impact on the Brent Geese using the grassland is minimised.

11. All works to be undertaken within and adjacent to Natura 2000 Sites within Dublin Bay will be undertaken in accordance with the requirements of a suitably qualified ecologist appointed following consultation with the National Parks and Wildlife Service.

Reason: In the interest of ecological protection.

12. The developer shall participate in the detailed monitoring of bird species and bird numbers together with their distribution within the Dublin Bay Area over the next six year period from the date of this order. Details of the exact nature and composition of the surveys shall be agreed in consultation with the National Parks and Wildlife Service.

Reason: To add to the scientific knowledge of the ecology of Dublin Bay.

13. A clearly demarcated pedestrian crossing on Pigeon House Road to the east of the wastewater treatment plant, together with the construction of a railing along the footpath on the northern side of the Pigeon House Road and a slip form kerb barrier, shall be provided along the southern side of Pigeon House Road and shall be constructed prior to commencement of development. Access arrangements for pedestrians shall be monitored on a weekly basis throughout the construction period. Where it is decided that pedestrian access arrangements to the South Bull Wall and surrounding amenity area are adversely affected during the construction period, appropriate measures shall be incorporated to minimise any impact on pedestrian access arrangements.

Reason: In the interest of pedestrian safety.

14. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the construction sites, and the area of land affected by the laying of electric cables, the proposed new access slip road on land and the protection of any marine archaeological deposits that may exist in the vicinity of the proposed diffuser shaft. In this regard the developer shall:
 - (a) Notify the Department of the Environment Community and Local Government in writing at least four weeks prior to the commencement of any site operations (including hydrological and geotechnical investigations) relating to the proposed development.
 - (b) Employ a suitably qualified archaeologist who shall monitor all site investigations and other excavation works.
 - (c) Provide arrangements for the recording and for the removal of any archaeological material which the Department of the Environment Community and Local Government considers appropriate to remove.

In default of an agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: 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.

15. An archaeological dive inspection shall take place prior to commencement of works in order to clarify the nature of the anomalies identified during the off-shore investigations on the sea bed. If required, the diffuser shaft shall be relocated to a point as close as possible to the proposed location without impinging or impacting upon any feature of archaeological interest. All such works shall be carried out in consultation and under the supervision of a suitably qualified marine archaeologist.

Reason: In order to conserve the archaeological heritage of the bay and to secure the preservation and protection of any remains that may exist within the bay.

16. The developer shall inform Dublin Port Authority of the precise location, including the geographical co-ordinates, of the tunnel and the outfall diffuser shaft. The location of the diffuser shaft, as constructed, shall be clearly and accurately marked on a revised Dublin Admiralty Chart.

Reason: To ensure that the diffuser shaft and outfall tunnel can be accurately located and identified, to notify marine traffic.

**Member of An Bord Pleanála
duly authorised to authenticate
the seal of the Board.**

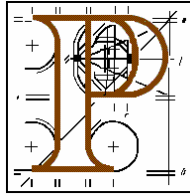
Dated this day of 2012.



ATTACHMENT B.3.2:

AN BORD PLEANÁLA INSPECTOR'S REPORT, OCTOBER 2012

An Bord Pleanála



Inspector's Report

PL29N.YA0010

Development

Description: Ringsend Wastewater Treatment works Extension.

Address: Ringsend Wastewater Treatment Works, Poolbeg Peninsula, Dublin 4.

Planning Application

Planning Authority: Dublin City Council

Planning Authority Reg. Ref.: ----

Applicant: Dublin City Council

Type of Application: Application under S.226 of the Planning and Development Acts 2000 -2006.

Planning Authority Decision: Not Applicable

Planning Appeal

Observers: (i) South Dublin County Council, (ii) Dun Laoghaire-Rathdown County Council, (iii) Fingal County Council, (iv) Meath County Council, (v) National Roads Authority, (vi) Inland Fisheries Ireland, (vii) Dublin Docklands Development Authority, (viii) Sandymount and Merrion Residents Association, (ix) Dublin and Mid-East Regional Authorities, (x) Health Service Executive, (xi) Birdwatch Ireland, (xii) Department of Arts Heritage and the Gealtacht, (xiii) Environmental Protection Agency, (xiv) Department of

Communications Energy and Natural
Rescorces.

Date of Site Inspection:

6th September 2012

Inspector:

Paul Caprani

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1.0 INTRODUCTION AND BACKGROUND

Consent is sought under Section 226 of the Planning and Development Act 2000 (as amended) for the extension of the Ringsend Wastewater Treatment Works. The proposed works sought are primarily predicated on one of the many recommendations of the Greater Dublin Strategic Drainage Study (GSDSDS) which was completed in 2005 and recognised that the Ringsend Wastewater Treatment Works was overloaded and operating at over capacity. The GSDSDS study recommended the provision of a new regional wastewater treatment plant in North County Dublin which would divert a number of catchments areas, primarily in Fingal, that are currently discharging to the Ringsend Wastewater Treatment Works. The other key element of the strategic drainage study was to seek the expansion of the existing wastewater treatment works which was designed to treat an average influent loading of 1.6 million population equivalent to its maximum achievable capacity of 2.4 million p.e. with an average or “firm”¹ capacity of 2.1 million p.e. It was anticipated that the capacity of the treatment plant under Phase 1 (1.6 million p.e) would not be reached until 2020 however the capacity has been exceeded in recent years and the treatment plant has failed to requisite standards (on and 95%ile basis) for Total Suspended Solids (TSS) on a number of years and Biochemical Oxygen Demand (BOD) in one year (2009).

The proposed scope of works under the current application seeks to modify the existing wastewater treatment works to improve efficiency and capacity on site and to install additional secondary treatment works on a 0.8 hectare site with the confines of the site capable of treating a further 400,000 p.e.. The proposal also involves the construction of a 9 kilometre long sea outfall pipe which will disperse effluent beyond waters designated under the Surface Water Regulations (SI 272 of 2009), The Bathing Regulation (SI 79 of 2008) and The Urban Wastewater Treatment Regulations (UWWT Regs), (SI 254 of 2001 and SI 440 of 2004).

In accordance with the provisions of the Wastewater Discharge (Authorisation) Regulations 2007 (SI 684 of 2007), the EPA granted a licence (D00 -34-01) to discharge into the Lower River Liffey. The Emission Limit Values (ELV’s) in the Licence are set in accordance with the limits cited in the UWWT Regs of 2001 and 2004 (See Table 3.2 Of the EIS).

An EIS has been submitted with the application. The assessment and evaluation of the EIS submitted with the application is set out in Appendix 1 of this report. An oral hearing was also held in relation to the application in the offices on the Board on the 18th, 19th and 20th of September 2012. A full recording of the entire proceedings of the Oral hearing is contained on file. The proceedings of the hearing are summarised in Appendix 2 of this report. Separate Appropriate Assessments screening reports and subsequent NIS’s for individual aspects of the proposed development, where they had the potential to significantly affect the Conservation Objectives of designated Natura 2000 sites within Dublin

¹ Firm capacity refers to the capacity when the largest processed unit is out of service for maintenance, equipment failure or upgrading etc.

Bay, were prepared and submitted as part of the application. These are contained in appendix 2 of the EIS.

2.0 SITE LOCATION AND DESCRIPTION

2.1 The Environs of the Wastewater Treatment Plant

The Ringsend Wastewater Treatment Works is located at the mouth of the River Liffey on the Poolbeg Peninsula on the southern side of the river. It is located adjacent to and to the east of the Poolbeg Power Station. Wastewater associated with the municipal urban area of the city has been treated in this location for over a century. The area of land to the immediate north of the main plant accommodates storm water tanks associated with the treatment plant.

Lands to the immediate west of the wastewater treatment plant towards the city centre are for the most part vacant. Lands to the west immediately contiguous to the treatment plant have been granted planning permission for the waste to energy incinerator. There are also a number of other commercial enterprises in the vicinity of the treatment plant including storage and distribution depots and car breaking and scrap metal storage facilities.

There are two protected structures in the vicinity of the site. The former Pigeon House Hotel a late 19th structure which is in good condition and currently in office use and the original Poolbeg Power Station, a redbrick building with a modest sized chimney stack which is currently in poor/bad condition.

On the east side of the site, the Poolbeg Power station is the predominant land use. A rectangular area of wasteland in the south eastern corner is to be utilised as the entrance shaft to the tunnelled outfall into the Bay. The South Bull wall is located beyond the ESB lands. This is an important amenity area for walkers, runners and fishing activities. The area is accessed along the Pigeon House Road and also through walkways associated with the Irish Town Nature Reserve to the south of the site. The Irishtown Nature Reserve provides a buffer between the port related activity on the Poolbeg peninsula and the Sandymount Strand. A small area of open space separates the Irishtown Nature Reserve from the southern boundary of the treatment plant. This area of open space is commonly known as 'Goose Green', presumably because Brent Geese frequent the open space.

In terms of residential receptors the nearest residential areas are located approximately 900 metres to the west of the site beyond the Sean Moore Roundabout at Leukas Street and Cymric Road. Other dwellings are located in close proximity, on Pigeon House Road to the North of Sean Moore Roundabout and on York Road on the approach to the East-Link Toll Bridge. Just over 1 km to the southeast of the site to the south of Sean Moore Park, residential dwellings are located along Beach Road. There are no dwellings in the immediate vicinity of the site.

In terms of transport and access all traffic to and from the facility is required to travel along Pigeon House Road, SandB(A)nk Road before meeting up the Sean Moore Road (R131) at the Sean Moore Roundabout. The Roads between the site and the Sean Moore Roundabout are relatively wide, although in parts poorly surfaced. The Roads are lightly trafficked although due to the nature of the surrounding land uses the traffic volumes are dominated by HGV's. The Sean Moore roundabout is a relatively busy junction facilitating traffic to and from the East Link Bridge further west. Details of traffic levels on the road network in the vicinity are set out in Chapter 12 of the EIS.

The treatment works outfall is located to the east of the main wastewater treatment plant at a point just east of the ESB power station. The outfall is located approximately 1 kilometre to the east of the main treatment plant, in close proximity to the great south wall where the Liffey Estuary meets Dublin Bay. The wastewater discharge is mixed with water from the ESB power station which is used to cool the gas turbines at the power station before being discharge into the river. The volumes of cooling water used by the ESB varies, during my site inspection it was indicated to me that the average volumes of cooling water are c 10 m³/s, similar to the maximum discharge from the wastewater treatment plant.

2.2 *The Environs of Dublin Bay*

Dublin Bay is described in the EIS as a relatively shallow bay reaching a maximum depth of 20 metres approximately 10 kilometres out to sea. The water depth decreases towards the harbour with depths of less than 5 metres occurring in the inner half of the bay. The North Bull Wall is a stone embankment that is only inundated at half tide. Therefore it holds back the water flowing out of the harbour at and after half ebb.

Four main rivers discharge into Dublin Bay, the Liffey, Tolka Dodder and the Camac. These Rivers discharge their own nutrient loads and suspended solids into the Bay which are obviously independent of and not influenced by the Ringsend WWTP.

The navigation channel runs close to the Great South Wall and extends from the port area through the mouth of the harbour. The navigation channel is located in close proximity to the outfall and is maintained at a depth of 7 to 8 metres below chart data. Periodic dredging maintains this depth. Information provided at the oral hearing indicated that there may be plans afoot to increase the depth of dredging in order to facilitate ship of deeper draft. The current depths in Dublin Port are dominated by the tidal fluctuations. Freshwater inflow from the Liffey influences the currents. Dublin Bay contains a number of designated conservation sites including SACs and SPAs and these are shown in Figure 3.4 of the EIS and are discussed in more detail below.

The inter-tidal habitats of Dublin Bay comprise primarily of sandflats. The sand dunes on the North Bull Island form a buffer from the salt marsh habitats on the rear of the Island. These salt marsh habitats contain many salt meadows

(Atlantic and Mediterranean) which are Annex 1 habitats (see section below). The inter-tidal areas between the Bull Island and the mainland comprises of mudflats and sandy mud flats. The area between the north of Dublin Port and the Clontarf comprises mainly of mudflats and muddy sand with shingle and mussel beds. Much of the sediment in this area is derived from the Tolka basin. The EIS notes that green algae mats are most pronounced in the South Bull Lagoon. Green algae growth is notable also in the north lagoon and the western part of Sandymount strand and Ringsend.

2.3 *Existing Water Quality within the Bay*

The EPA has completed a Water Framework Directive (WFD) classification of Transitional and Coastal waters. Dublin Bay and its estuaries have been designated as being of ‘moderate status’.

In the inner part of Dublin Bay is designated as a Transitional Water Body for the purposes of the WFD and SI 272 of 2009. The Transitional waters for the most part coincide with the North Bull Wall and the South Harbour Wall the plume of the Transitional water body extends slightly beyond these walls. The Coastal water body extend one nautical mile from the coastline. These defined water bodies are indicated on figure 8.1.

In accordance with the objectives of WFD, there is a requirement to bring all water bodies to ‘good status’ by December 2015. Derogations beyond this date are permitted in certain cases. In the case of the receiving waters in Dublin Bay, the target date has been extended to 2027 due to Dublin Bay’s location at the bottom of the catchments for the Rivers Liffey, Dodder and Tolka.

Under the Quality of Bathing Waters Regulations (SI 79 of 2008), four stretches of Beach have been designated as bathing water protected areas within Dublin Bay. These are:

- Dollymount Strand
- Sandymount Strand
- Merrion Strand
- Seapoint.

It is noted that Dollymount Strand attained Blue Flag Status in 2010 before losing this status in 2011. However it regained blue flag status in 2012.

In terms of trophic status, a Trophic Status Assessment Scheme was undertaken by the EPA in 2007-2009 in accordance with the requirements of the Nitrates Directive and the UWWT Regulations. The waters are assessed in terms of three criteria namely nutrient enrichment, (namely Dissolved Inorganic Nitrogen –DIN and Molybdate Reactive Phosphorous – MRP), accelerated plant growth, and levels of dissolved oxygen (DO). The most recent surveys undertaken show that the Liffey estuary lower and Dublin Bay were unpolluted, in that none of the criteria above were breached. The Tolka Estuary is deemed to be ‘potentially eutrophic’ this is due to the fact that two of the three criteria were breached and that the third criteria falls within 15% of the relevant threshold value.

Other water quality data recorded by Dublin City Council (DCC) for various points along the river and within Dublin Bay are set out on Table 8.17 of the EIS. MRP is highest at immediately downstream of the outfall (Ringsend Cascade with recorded levels of 0.155 mg/l- almost four times the limit for higher salinity waters for Transitional waters as set out in the Surface Water Regulations) this indicates that the plant is a significant contributor to nutrient enrichment. High MRP values are also recorded in the Tolka Estuary however it is extremely unlikely that this can be attributed to the Ringsend WWTW's.

While MRP is a limiting factor for nutrient enrichment in fresh and estuarine waters, nitrogen is considered to be the limiting nutrient in open saline coastal waters (\geq to 34.5 saline units or psu). The Surface Water Regulations set a limit of 0.25 mg/l for DIN mg N/l for such coastal waters. This level was not exceeded in any of the samples recorded by DCC in Table 8.17 for Dublin Bay. The highest recorded level was 0.122 mg/l at South Bull Buoy 1 km SE of Poolbeg Lighthouse.

2.4 Designated Natura 2000 Sites within the Bay

There are a large number of Natura 2000 designated sites in the vicinity of Dublin Bay and these are set out in section 10.3.2 of the EIS and are summarised in Table 10.1. The sites that have the potential to be impacted upon are the coastal waters, particularly in Dublin Bay between Howth Head and Dalkey. The most likely SAC's and SPA's to be potentially affected by the proposal together with their qualifying interests are set out in the Table below:

Table 1: Designated European Sites

Designated Area	Qualifying Interest
South Dublin Bay and River Tolka Estuary SPA (code: 004024)	Light –Bellied Brent Goose (wintering) Oystercatcher (wintering) Ringed Plover (wintering) Grey Plover (wintering) Knot (wintering) Sanderling (wintering) Bar-tailed Godwit (wintering) Redshank (wintering) Roseate Tern (passage) Common Tern (Breeding)
North Bull Island SPA (code: 004006)	Light –Bellied Brent Goose (wintering) Shelduck (wintering) Teal (wintering) Pintail (wintering) Shoveler (wintering) Oystercatcher (wintering) Grey Plover (wintering) Knot (wintering) Sanderling (wintering) Bar-tailed Godwit (wintering) Black-tailed Godwit (wintering) Curlew (wintering) Redshank (wintering)

	Turnstone Wintering Wetlands and Waterbirds
Howth Head Coast SPA (code: 004113)	Kittiwake (breeding)
South Dublin Bay SAC (code: 00210)	Mudflats and sandflats exposed at low tide
North Dublin Bay SAC (code: 00206)	Mudflats and Sandflats exposed at low tide Annual vegetation of driftlines Salicornia (sea/salt tolerant plants) and other annuals colonising mud and sand Atlantic salt meadow Mediterranean salt meadows Embryonic shifting dunes Shifting white dunes along the shoreline Fixed coastal dunes with herbaceous vegetation Humid dune slacks Petalophyllum ralfsii (a particularly rare liverwort)
Howth Head SAC (Code: 00202)	Vegetated sea cliff of the Atlantic and Baltic Coasts European Dry Heaths

3.0 DESCRIPTION OF EXISTING PROCESSES AT THE TREATMENT PLANT

A preliminary design report for the upgrading of the works was initiated in 1993. The Ringsend Wastewater Treatment Works was extended to its current configuration under the Dublin Bay Project Contract No. 2. These works were initiated in 1999 and were officially handed over to the operator in May 2005.

The inflow into the wastewater treatment works are derived from four main municipal sources.

- The Sutton Pumping Station.
- The West Pier Dun Laoghaire Pumping Station.
- The Main Lift Pumping Station which serves the city centre area to the East of the Sean Moore Roundabout c 1 km from the treatment works.
- The Dodder Valley Gravity Sewer.

3.1 Preliminary Treatment

The influent from each of these four stations is received at the inlet works in the south-western corner of the site. The influent is passed through 6 millimetre wedge wire bar screens. The influent flow is metered throughout the process. These screening facilities are designed to handle a peak wet weather flow of 23 m³/s. These screenings are then compacted and placed in enclosed skips for disposal.

Fat, oils, greases and grit (FOGG) are removed by recently commissioned aerated grit removal tanks. The removed grit is then sent to cyclones and clarifiers for further dewatering and is dropped into open skips for disposal.

3.2 *Primary Treatment*

The effluent is passed through primary clarifiers with lamella baffles to aid the primary clarification process. Sludge holding tanks are located on either side of the lamella settling tanks. The lamella packs comprise of a series of inclined plates which cause flocculated material to precipitate from the water that flows over the plates. The EIS states that the existing tanks can meet the design flow requirements. A portion of the surplus activated sludge collected from the lamella clarifiers is returned to the clarifiers for co-thickening. Scum is also removed from the top of the clarifiers and discharged into the sludge holding tanks. The sludge holding tanks are located on either side of the primary settlement tanks.

3.3 *Secondary Treatment*

The flow exiting the primary settlement enters flow splitting distribution boxes to split the load into the sequencing batch reactors (SBRs). These SBRs were initially installed to operate as typical SBR (i.e. fill, react, settle, decant, refill). However, as a result of filamentous growth which could not be controlled by the operators the process was modified by implementing a continuous inflow with increased aeration which is successfully addressed the filamentous growth problem.

A total of 24 SBR's are located on site, on two levels (12 on the lower level and an additional 12 immediately above). The EIS states that the performance of the SBRs in this continuous inflow mode has generally been compliant with the effluent quality standards with regard to BOD, but not in relation to total suspended solids (SS). The SBR's on the upper tier levels are experiencing some problems with settlement due to high winds upsetting quiescent conditions to enable settlement. This is to be addressed by providing a cover on the upper tier SBR's.

3.4 *Tertiary Treatment*

No de-nitrification processes or phosphorous removal currently takes place within the plant. During the bathing season, ultraviolet (UV) disinfection is operated and the EIS states that this has performed well in terms of bacteriological kill.

3.5 *Storm Overflow Infrastructure*

A series of existing storm flow retention basins are located to the immediate north of the main wastewater treatment works and comprise a volume of 62,100 m³ in total. These storm water tanks, accommodate increased wastewater during periods of heavy rainfall where flows above 11.1 m³ /s cannot be catered for at the wastewater treatment plant. Where normal average flows resume, the wastewater stored in the tanks is returned to the plant for treatment. In the more infrequent cases during a severe rainfall event, the

storage tanks reach capacity, the storm water outfall pipe discharges to storm water into the River Liffey in the vicinity of these tanks. The storm overflow is located to the immediate northeast of the main tanks and discharges directly into the River Liffey.

3.6 *Sludge Treatment*

In terms of sludge treatment, six rotary drum thickeners are provided and are located on site. These thickeners accommodate almost all of the surplus activated sludge with the exception of the small amount which is returned to the lamella clarifiers for co-thickening. The thickened surplus activated sludge from the drum thickeners is held in a partitioned portion of one of the main sludge holding tanks located adjacent to the primary clarifiers. These holding tanks also receive sludge from the SBRs. All of the sludge is screened and discharges to the buffer tanks. The sludge is then transferred to a sludge treatment facility which is housed in the western portion of the site. The sludge was originally passed through belt filter presses; however, three centrifuges have been added (two outside the main sludge treatment building). The centrifuges dewater the sludge to approximately 20% dry solids. This sludge is then subject to a thermal hydraulics process. This process treats the sludge under high temperature and pressure and makes it more amenable to anaerobic digestion. The number of anaerobic digesters on site was recently increased from three to four and this increases the sludge processing system to a capacity of 120 tonnes per day. The bio gas generated by the anaerobic digestion process is used to fuel boilers and generate electricity and recover heat through the combined heat and power (CHP) system. The CHP system generates slightly more than two megawatts of electricity from bio gas. All bio solids generated in the sludge treatment have been beneficially reused in agriculture for more than a decade. Three thermal bio solid driers further dewater the sludge forming pellets of least 90% dry matter. Both Sludge cake and bio solid sludge is produced. If the capacity of the thermal driers is exceeded in any given day, the excess digested bio solids are centrifugally dewatered to approximately 30% dry matter. The treated sludge produced always meets the standards for agricultural reuse.

3.7 *Odour Control*

Odour problems associated with the plant have been well documented. Since 2005 works have been undertaken to reduce odour emissions on the site. The works undertaken are detailed in Chapter 13 of the EIS. The mitigation measures undertaken to date include new channel covers and odour control units for the effluent. Primary clarifiers have been covered, upgraded drier combustion chambers and new bio gas scrubbers upstream of the combined heat and power plant. A full time odour control technician was appointed in 2007.

3.8 Existing Hydraulic and Organic Loadings at the Wastewater Plant

Currently, there are a total of 24 sequencing batch reactors on site. These are operated in six separate modules, each comprising of four basins. Each of the modules has a capacity to remove BOD in accordance with requirements for a population equivalent of just over one-third of a million p.e. Thus when all six modules are operating, the total capacity of the existing plant is, approximately 2 million p.e. In order to allow essential servicing and maintenance to the sequencing batch reactors it is possible or likely that one of the modules will not be operating at any given moment. Under such a scenario the output from the sequencing batch reactors would be reduced to approximately 1.665 million p.e.

The peak storm flow to Ringsend is 22.6 m³/s. The storm holding tanks cater for flows in excess of full flow to treatment which is 11.1 m³/s. The dry weather flow based on 2001 flows is estimated at 3 m³ per second. This represents approximately 34% of the full flow to treatment (11.1 m³/s). The average daily flow has been increasing continuously since 2003 and in 2008 the average daily flow was just over 95% of the design average daily flow (470,000 m³ or 5.43 m³ with an average design flow of 492,000 m³ per day or 5.69 m³/s).

In terms of organic loading, the measured load for BOD, total suspended solids and nutrients are higher than the design load. The organic loadings at the WWTP is summarised in the Tables below:

Table 2: BOD Tonnes per Day

	Average	Design ²	95% ile ³	Max
2003	111	98.4	157.3	221.8
2004	118.8	98.4	162.8	237.6
2005	117.9	98.4	162.3	257.6
2006	117.3	98.4	195.1	293.3
2007	101.5	98.4	140.3	361.5
2008	107.4	98.4	181.7	289.8

Table 3: Total Suspended Solids Tonnes per Day

	Average	Design	95% ile	Max
2003	89.8	101.1	128.8	211.1
2004	94.0	101.1	135.6	244.4
2005	96.2	101.1	142.7	530.7
2006	96.2	101.1	143.3	748.4
2007	102.3	101.1	146.7	742.1
2008	112.5	101.1	175.5	860.2

² Design Year 2020

³ The 95%ile in this instance refers to flow that are exceed 5% of the times as opposed to 95% of the time

There is no dedicated nutrient removal from the treatment plant (although it is estimated that approximately 35% of Phosphorous (P) is being removed through sedimentation and biological uptake). Nutrient levels in the influent (Total Phosphorous, Molybdate Reactive Phosphorous(MRP), Total Nitrogen and Ammonia) are set out in Section 3.4.3.5 of the EIS.

4.0 PROPOSED DEVELOPMENT

The purpose of project is to extend the capacity of the existing works to the maximum achievable having regard to the site constraints. There is 0.8 hectares of available land within the site to accommodate further extension. Within this area it is proposed to extend the wastewater treatment plant to accommodate the treatment of an additional 400,000 p.e. The existing capacity coupled with the extended capacity of 400,000 p.e. will give a total treatment capacity of just under 2.1 million p.e.

The Board will be aware that the proposed development is predicated on a 'Design Build and Operate' contract. As such the finer details of the proposed infrastructure required to achieve the design parameters will be decided by the contractor building the extension. The EIS sets out a worst case scenario in terms of the environmental impact arising from the design alternatives considered.

4.1 Immediate Upgrades

The immediate upgrades essentially relate to the addressing the deficiencies in treating the TSS deficiencies and the completion of the odour control programme. The works include the following:

- Installation of covers on the SBR's
- Install effluent fine screens for a portion of the flow so that, when blended with the unscreened flow it will assist in achieving a 95% compliance level of 35mg/l. The fine screen facility is to be located adjacent to the SBR.
- Capture and treatment of the ventilation air from both the dryer buildings
- Provision of 50% additional capacity from the main odour control unit.
- The capturing and treatment of air from the screening building.
- Enclosure and provision of odour control for the grit storage skips.

4.2 Extension to the Existing Wastewater Treatment Plant

In terms of development within the existing site, the EIS states that there are three likely design options for the efficient utilisation of the 0.8 hectares area within the site. These include: -

- Sequencing batch reactors with effluent filters.
- Deep shaft aeration system with flotation clarifiers
- Conventional activated sludge with final clarifiers.

The EIS provides little information on the detailed nature of the processes which will be undertaken under the alternatives considered. As consistent with the design/build form of contract, contractors will have the option of submitting alternative design to the baseline tender reference design, provided it is compliant with the principal of environmental impacts, that is the environmental impact shall not be worse than the assessed design presented in the EIS. Details will be considered when the contractor decides on a specific design option. The chapter on the consideration of alternatives in the EIS (Chapter 5) evaluates the options for the extension in a little more detail. It is important to bear in mind however that the EIS evaluates the worst case scenario in relation to the options considered. For example in terms of visual impact, it is assumed that SBR's on a size and scale of those which exist on site will be constructed. In terms of noise and vibration, it is assumed that 120m depth, Deep Shaft Aeration tanks will be constructed.

4.3 *Effluent Outfall Tunnel Extension*

The second major aspect of the proposed development is the construction of an effluent outfall tunnel extension. This is to be located at a separate construction compound approximately 700 metres to the east of the sequencing batch reactors and to the southeast of the Poolbeg Power Station. The construction compound is approximately 250 metres in length and 90 metres in depth (site area c. 2.25 hectares or 5.5 acres). This compound will accommodate the following: -

- The tunnel inlet shaft.
- Mobile crane.
- Materials storage area (for pipes, segments, rails, lubricants etc.).
- A spoil handling facility.
- A slurry separation plant and settlement tanks.
- A grout batching plant.
- Wheel wash facilities.
- Generators, offices, stores, workshop, canteen and car parking area.

The spoil handling facility will be sufficient to hold a minimum of two days' worth of spoil. The layout of the tunnel inlet shaft compound is indicated on Figure 4.6 of the EIS.

The inlet shaft will be constructed on shore on the Poolbeg Peninsula. The estimated finished internal diameter of the tunnel inlet could be as high as 20 metres, but may be smaller depending on the eventual tunnelling construction technique adopted. Based on the preliminary conceptual design the tunnel inlet shaft invert is likely to be somewhere between 66 metres and 110 metres below existing ground level. The final alignment selected for the tunnel section will depend on geotechnical considerations made by the contractor. Again the tunnel inlet shaft wall structure and shaft lining design will be governed by the contractor's choice of construction techniques and preferences which will be

heavily influenced by geotechnical, geological and hydrogeological considerations.

The tunnelled section within the shaft will be approximately 9,000 metres long with a finished internal diameter of about five metres. The marine site investigations show that tunnelling in deeper bedrock offers best conditions for tunnelling because of bedrock stability in accordance with best tunnelling practice therefore the tunnel depth should be kept at twice the excavated diameter of the tunnel (i.e. 13 metres below the rock head). The conceptual layout is indicated in Figure 4.10 of the EIS. The tunnel will be constructed using a tunnel boring machine (TBM). The final tunnel lining will be constructed using precast concrete elements which are assembled and installed directly by the tunnel boring machine. The tunnel section will advance at a rate of approximately 16.5 metres a day and it is estimated that it will take 18 months to construct the tunnel. At a point approximately nine kilometres out to sea, a diffuser shaft will be sunk. This shaft will be used as the permanent wastewater treatment works final treated effluent riser. Hydraulic analyses indicate that the diffuser shaft internal diameter will be in the order of four metres or less. A diffuser head structure (most likely with 4 rubber self-deflating flaps on each side of the shaft) will be constructed at this location to enhance dispersion of the final treated effluent discharge. The diffuser head structure will extend to approximately 5-7 metres above the seabed level. The seabed level at this location is estimated to be approximately 26 metres below ordnance datum (Malin). The final configuration of the diffuser shaft including the number of diffuser heads will be determined following the completion of a water quality dispersion assessment/modelling studies to be undertaken by the successful contractor.

As consistent with the design/build form of contract, contractors will have the option of submitting alternative design to the baseline tender reference design, provided it is compliant with the principal of environmental impacts, that is the environmental impact shall not be worse than the assessed design presented in the EIS. It is estimated that it would take between six to eight months to construct and fit out the diffuser shaft. The EIS considers the impact of spoil disposal to land and the impacts associated with spoil transportation overland. However Dublin City Council is investigating the option of disposal to a suitable site at sea, a dumping at sea licence application is being prepared presently. This would require a separate licence application process to the EPA and a full environmental assessment. The disposal to sea option would only be pursued if the impacts of this option for similar are lesser than the disposal to land option.

4.4 Road Improvements

Road network improvements will be required on the Pigeon House Road. These will involve the construction and upgrading of both Pigeon House Road and pathway. A new length of spur road will be constructed between the Pigeon House Road and the southeastern corner of the Ringsend Wastewater Treatment Works. This will facilitate the development of the 0.8 hectares site within the Ringsend Wastewater Treatment Works. The three areas where

temporary car parking and marshalling areas are to be located, are indicated in Figure 4.12 of the EIS. These areas are located to the west of the existing wastewater treatment works.

4.5 *Procurement Options*

In terms of procurement options there will be two separately procured contracts. One for the extension of the existing wastewater treatment works and the second for all the works associated with the construction and operation of the tunnel infrastructure. The tender contract is expected to be a design and build contract. The contractors will prepare an environmental management plan. This plan will include responsibilities of procedures for implementing the required mitigation measures and systems of procedures to review the implementation process. The plan will address topics covered in the Environmental Impact Assessment.

5.0 **OBSERVATIONS TO THE BOARD**

The following submissions were received by An Bord Pleanála in relation to the application. These submissions are summarised below.

5.1 *Local Authority Submissions*

Four separate submissions were received from South Dublin County Council, Fingal County Council, Dun Laoghaire – Rathdown County Council and Meath County Council. All submissions stated that it is vital that the extension of the Ringsend Wastewater Treatment Works as planned gets approval from An Bord Pleanála in order to facilitate the future development of the Greater Dublin Region.

A separate submission from Meath County Council dated 22nd May 2010 notes that the EIS does not make reference to County Meath as part of the Ringsend catchment. The Board is requested to note that wastewater from the settlements of Rathoath, Ashbourne, Dunboyne and Clonee all drain into the Blanchardstown sewer which feeds into the Dublin piped network which is treated at Ringsend.

Reference is also made in the submission to the Regional Planning Guidelines for the Greater Dublin Area (2010 – 2022) which states that “*an agreed protocol should be put in place between local authorities in the GDA to ensure the optimum allocation of sanitary and other services for priority investments*”.

5.2 *NRA Submission*

The NRA submission makes reference to the National Development Plan 2011 – 2013 which identifies as a key investment priority the feasibility of constructing an Eastern Bypass of Dublin City. The NRA has carried out a feasibility study into the possible development of a Dublin Eastern Bypass and

it is noted with concern that limited reference has been made to the eastern bypass in the EIS. It would not be in the public interest should the proposed Ringsend Wastewater Treatment Works go ahead and that these works would create additional constraints on the design and construction of an already complicated and challenging civil engineering works which would be required for the eastern bypass.

5.3 *Dublin Docklands Authority Submission*

A submission from the Dublin Docklands Authority merely states that the authority has no comment to make in relation to the proposed development.

5.4 *Inland Fisheries Ireland Submission*

The submission notes that the hydrodynamic modelling of the existing and proposed discharge has identified a long-term positive impact in the water quality in the inner bay and estuary. The upgrade must ensure that the proposed final discharge provides at minimum good status for coastal waters under the Surface Water Regulations (SI 272 of 2009).

It is unclear how the proposed upgrade will impact on the existing storm flow retention basins which discharge directly into the estuary or how the default overflow from the primary settlement tank that operates in the event of a systems fault will operate under the planned upgrade.

Any environmental management plan should ensure that best practice is adopted throughout the construction and should provide mitigation measures for unexpected impacts during construction. Specific method statements will be required in respect of surface and groundwater management at the construction compound, at the onshore tunnel inlet, the seabed tunnel and the outlet diffuser shaft. Method statements must also address silt management including the management of tunnel spoil and marine sediments at the outlet diffuser shaft. Best practice must also apply in respect of drilling fluids/bentonite slurry, arising from the tunnelling process. Methodologies for drilling, pile driving, and blasting, all of which have the potential to create underwater noise and vibration, should comply with best international practice. All mitigation measures outlined in Chapter 19 of the EIS should at a minimum be carried out.

5.5 *Submission from the Joint Members of the Regional Planning Guidelines for the Greater Dublin Area*

This submission sets out the background to the proposed development and states that the proposals to extend the Ringsend Wastewater Treatment Works are welcomed. The Regional Planning Guidelines recognise that investment in the Wastewater Treatment Network has improved, but further improvements are needed for foul and stormwater drainage. Reference is also made to the Greater Dublin Strategic Drainage Study which includes an extension to the Ringsend Wastewater Treatment Plant, together with investigations for a new

suitable site for a regional wastewater treatment plant. The submission highlights the importance of continued investment in wastewater treatment to ensure high quality standards and to meet the provisions of the Water Framework Directive and Urban Wastewater Regulations and to facilitate future economic and demographic growth. Reference is made to regional planning policies and recommendations contained in the Regional Plan and it is concluded that the proposed extension to the wastewater treatment plant would be consistent with Regional Planning Policy and would be in compliance with other relevant sustainable and environmental criteria.

5.6 *Submission from Birdwatch Ireland*

It states that in order to meet the environmental standards, the Competent Authority should ensure that there are no adverse effects on the qualifying interests of Natura 2000 designations and priority habitats and species should occur. In this regard there are a number of significant deficiencies in the assessment as presented and thus a more comprehensive assessment of the potential impact is required in order to inform the decision making process. These include the following: -

There is a potential impact of nutrient reduction on the existing estuarine environment and in this regard species specific baseline habitat usage and prey availability data should be obtained in order to fully assess the potential impacts at the estuary, SPA and its sub-site level. This will ensure that site specific conservation objectives can be achieved. Furthermore the inter-related nature of the network of east coast estuaries and their usage by wintering waterbirds is not known. This needs to be considered carefully in the assessment.

Furthermore the impacts of the nutrient enhancement at the new discharge point have not been fully investigated. It is Birdwatch Ireland's view that the impacts on nutrient enhancement on the role of this sandbank as a possible nursery bed for sand eels and other prey of significant importance for terns and hawks should be considered. Both the Beaufort and Kish banks may play significant roles in providing prey for key species.

In terms of the terrestrial environment, there is significant scope to enhance the proposed mitigation measures presented in the appropriate assessment. In particular full consideration of the following is required.

- The inner areas of the bay have not been adequately assessed in terms of the potential disturbance for a range of species.
- The soft coastal fringe vegetation and in particular the development of embryonic shifting dune habitats play an important role in providing a degree of separation from intertidal areas by buffering the estuary from development recreation and traffic. There are also opportunities to provide additional and buffering grasslands to facilitate further potential habitat creation.

5.7 *Submission from Sandymount and Merrion Residents Association*

The commitment of Dublin Corporation to genuine public participation in the course of dealing with local communities in relation to the proposed development is questioned in the submission. The fact that residents must pay for the privilege of objecting to the proposed development is also questionable.

The submission goes on to outline the history of wastewater treatment at Ringsend. While the existing plant has resulted in some improvement in bacterial water quality in parts of the Bay, there is insufficient land available to permit nutrient removal from the discharge outfall water and to cater for the proposed secondary treatment of an additional 400,000 p.e. It is suggested to locate even more capacity at an existing wastewater treatment plant is merely politically expedient and does not constitute proper planning. There is no room for any further expansion at this location.

There is evidence that the possibility of constructing one or more plants to the north or west of region which could facilitate the redirection of some of the existing waste away from Ringsend and this has not been considered as part of the overall assessment. The overloading of the existing facility and the lack of tertiary treatment are causes for the continuing increase in algal growth in Dublin Bay.

The EIS acknowledges that currently the plant is overloaded. It is suggested that if a facility is overloaded the most obvious and sensible solution is to remove the overload, not add more.

The assumption that drawing a line on a map across the waters of Dublin Bay and siting the discharge point to one side of that line will prevent the discharge into nutrient enriched waters. Providing an imaginary line across the Bay and assuming that all effluent will not cross-over into designated sensitive waters is ludicrous.

It is noted that the Dublin City Development Plan includes policy SI 41 which seeks to support the development of a second wastewater treatment plant and orbital sewer to serve the Dublin Region as part of the Greater Dublin Strategic Drainage Study. The appropriateness of spending millions on upgrading an existing wastewater treatment plant when it is apparent that a new regional treatment plant is required in North County Dublin is questionable to say the least.

The lands surrounding the Ringsend Wastewater Treatment Plant are designated SPAs and SACs. Disturbance from sound sources may result in injury and possible mortality of cetaceans. The construction works will undoubtedly affect the flora and fauna in the vicinity. The proposal will result in a negative permanent visual impact as seen from Sandymount. The Great South Wall is a popular amenity for South Dubliners. The Poolbeg Peninsula has had more of its fair share of dirty undesirable industries.

The submission ‘demands’

- That the volume of sewage throughput at Ringsend Wastewater Treatment Plant be reduced permanently below the 1.6 million p.e. for which it was designed.
- All further expenditure of money which neither reduces nor solves the eutrophication problems of Dublin Bay should cease forthwith.
- At least one and possibly two additional wastewater treatment plants should be constructed over the next five years to the west and north of the city.
- All drilling and other works presently in progress which is and maybe associated with the implied expansion of the Ringsend Wastewater Treatment Works must cease immediately.
- The residents have never previously refused to accept important utilities even though it is meant loss amenities. However, the proposal represents a bridge too far. The proposal is deemed to be wholly unacceptable and will be resisted by the Sandymount and Merrion Residents Association.

5.8 *Submission from HSE*

It is noted that the EIS does not set out in a detailed manner the exact details regarding the design of the development and the processes to be used. It is recommended that the final design proposal be fully disclosed and submitted to An Bord Pleanála prior to planning permission being granted.

Further details of the diffuser discharge location likewise should be submitted to An Bord Pleanála prior to any planning permission being granted.

Details of the exact tunnel route location should be submitted to An Bord Pleanála prior to any permission being granted. Section 5.8.2 of the EIS in relation to the deep shaft NDN needs clarification as the EIS acknowledges that the Deep Shaft NDN has not been practiced at a scale comparable to that at Ringsend.

Details of the mitigation measures to ensure dust generation is presented are not apparent in the EIS. Significant dust generation could pose a risk to food contamination. In this regard food premises should be considered within the construction environmental management plan as identified in Chapter 13 of the EIS.

It is recommended that Environmental Management Plan incorporates a pest control plan.

It is recommended that any proposed road diversions required under a traffic management plan set out in Chapter 12 does not impact or disrupt on waste collection vehicles accessing the relevant food premises for the removal of waste material, particularly food waste from food premises.

It is noted the River Liffey which is designated as nutrient sensitive waters is in close proximity to the construction compounds. The observers were unable to identify in the EIS details of measures to be taken to ensure contamination arising from the construction phase is prevented.

It is recommended that a proposed water monitoring plan including proactive water monitoring occurs frequently at various stages of the wastewater treatment works extensions. This should be attached to any condition.

It is noted that a slurry tunnel boring machine method may be employed during the construction of the outfall shaft. It is recommended that slurry materials are to be non-toxic and bio-degradable. Frequent monitoring should be conducted to ensure that the slurry does not enter the groundwater system.

The observers were unable to identify details of mitigation measures to control and contain accidental spillages. Such mitigation measures should form part of the water quality management plan.

The observers were unable to identify in the EIS details of any mitigation measures to ensure that land contamination is prevented as referred to in Section 16.4.5.1 of the EIS.

The observers were unable to identify in the EIS details of any contingency plans in the event of flooding, collapse, equipment malfunction or explosion of tunnels during the construction. It is recommended that contingency plans are developed and attached is a condition of any planning permission granted.

Section 14.7 of the EIS notes that audible noise at low traffic levels may occur on a few occasions during the year for the residents of the Ringsend and Sandymount area. The HSE were unable to identify predicted noise levels or the duration of the residual noise emissions. It is therefore recommended that a condition be attached specifying that a noise management plan be incorporated into any grant of planning permission.

5.9 Submission from the Department of Arts, Heritage and the Gaeltacht

In relation to archaeological heritage it is considered that all mitigation measures which are summarised in Section 15.7 of the EIS should be implemented in full.

In relation to comments on the marine environment it is recommended that the applicant should consult directly with the National Parks and Wildlife Service. Introduction of certain sound sources into the marine environment as may result from construction or survey activities have the potential to cause injury or possibly mortality to species. In order to address this 10 specific conditions are

set out in the submission and these conditions should, according to the Department, be implemented in full.

The National Parks and Wildlife Service had requested at scoping stage that the issue of removing the current outfall position be assessed in terms of how it may impact on food sources of birds using the nearby designated sites. There is a need to assess the food requirements of each bird species in the Bay area that was of special conservation interest. Reference is specifically made to the estuary Ragworm (*Hediste Diversicolor*). This forms an important part of the diet for Knot, Dunlin, the Black Tailed Godwit, the Oyster Catcher, the Bar Tailed Godwit and the Curlew. It is possible that the population of this Ragworm could decrease due to the sewage treatment operations. Green micro alga in Dublin Bay may have experienced excessive growth due to the nutrient enriched waters associated with the wastewater treatment plant. It is quite difficult to be certain that the proposed reduction in nutrients in key water bird sections of the SPAs of Dublin Bay will not result in the deterioration of the feeding resources for some of the various birds listed as special conservation interest. The NPWS recommends that monitoring should concentrate on bird uses and that it should not be intensive but rather a long-term monitoring conducted at intervals of 3-6 years. The Department recommends that such monitoring be made a condition of any permission granted.

Reference is also made to potential disturbances as a result of anthropogenic activity to the feeding and water birds within the SPA and to maintain adequate amount of amenity grassland within the Dublin area for Brent Goose feeding sites. If green micro alga resources are reduced in future years this could reduce the potential impact on Brent Geese.

It is recommended that all mitigation measures proposed in the EIS and Appropriate Assessment for the protection of the natural heritage are made a condition of planning. Furthermore all designated areas disturbed during construction should be reinstated. This is particularly applicable to the goose compensatory grassland where the work should take place outside the bird wintering season and should be reinstated prior to the arrival of the wintering birds.

5.10 Submission from the EPA

The submission notes that the Agency is the Competent Authority for the licencing of Water Services Authority wastewater discharges in accordance with SI 684 of 2007. The Agency granted a licence for the Greater Dublin area glomeration (Reg. no. D0034-01) on 27th July 2010.

The proposed relocation of the primary discharge point will require a review of the existing licence. As part of this review the applicant may seek the amendment of emission limit values. To date the Agency has not received an application from the licensee for a review of their existing licence. With regard to odour and noise the EPA refer the Board to Regulations, SI 787 of 2005 and SI 240 of 2006. Requests for comments in relation to aquatic ecology should be referred to the National Parks and Wildlife Service.

In accordance with Regulations 42(16) of SI 477 2011 the Agency shall grant a licence only after having determined that the project in question shall not affect the integrity of a European site. Furthermore in accordance with Article 42(21) of the said Regulations the Agency shall take account of the screening for Appropriate Assessment or the Appropriate Assessment undertaken by another public authority and shall consider the extent to which the scope of that screening for Appropriate Assessment or Natura Impact Statement covers the issues that would be required to be addressed by the Agency in view of the scope of the licence to be granted by the Authority. As part of the Agencies consideration, any issues that have not been adequately addressed will be identified and will be requested as further information by the Agency. Should you wish the Agency to make further observations on your assessment of the likely impact of the development on the wastewater discharge please contact the EPA office in County Cork (address included).

5.11 Submission from the Department of Communications, Energy and Natural Resources

This submission merely acknowledges the receipt of the Boards letter to the Department and the contents will be brought to the Ministers attention.

5.12 Further NRA Submission

A letter was received from the NRA (dated 21st August 2012) indicating that the Authority would not be represented at the oral hearing.

6.0 PLANNING HISTORY

Since the early 20th century a wastewater treatment plant serving the city of Dublin has been located on the Poolbeg Peninsula. It essentially consistent of a series of settlement tanks which enable some sedimentation of wastewater to take place prior to discharge into the Liffey Estuary. In the 1960's an activated sludge system was introduced on site which enabled some secondary treatment to take place prior to discharge. The current operations on site were initiated when a preliminary report recommended that significant improvements and advancements in the treatment of wastewater take place on site. These works were commissioned in 2003 under:

- Stage 1 which involved an immediate design and construction based on a design horizon of 2020
- Stage 2 Subsequent expansion of capacity, as required, on a 0.8 ha site set aside for this purpose.

Works undertaken in phase 1 involved the construction of a new inlet works, the SBR's on site and new sludge handling facilities. These works were completed in 2005. Details of this application made to An Bord Pleanála are not contained on file.

7.0 PLANNING POLICY CONTEXT

7.1 *National Spatial Strategy (NSS)*

Section 3.3.1 of the Strategy notes that:

The continuing health of Dublin is critically dependant on: (inter alia)

- *Efficient and cost effective water services and waste management infrastructure*

7.2 *The Greater Dublin Strategic Drainage Study*

The Greater Dublin Strategic Drainage Study (GSDSDS) sets out the broad drainage requirements for the region to cater for the anticipated and/or assumed development of the GDA up to the year 2031. This document was completed in 2005.

The main strategic components include

- The upgrade of the existing drainage system
- The upgrade of the existing treatment plants to their ultimate capacity
- To construct a new regional treatment plant in Fingal
- To provide a new orbital sewer to the western suburbs of Dublin and the adjacent catchments in Meath and Kildare.

The GSDSDS does not provide any detailed information in relation to the infrastructure requirements set out for the region. Rather the report concentrates on a review of local authority drainage practices in five key areas namely

- New development
- Environmental management
- Climate change
- Inflow/infiltration and exfiltration
- Stormwater flows to basements

A set of detailed technical documents have been produced to ensure consistency of approach between all local authorities. The GSDSDS report has been through a public consultation process and has been adopted by the local authorities as containing the blueprint for future drainage requirements up to 2031.

A key recommendation of this study was to provide a new regional WWTP in north County Dublin together with a new Orbital Drainage System serving the greater Dublin Area.

Specifically in relation to the Ringsend works the study notes that the existing plant is at capacity and needs immediate expansion to meet the requirements for the Nitrogen Discharge Standards for Dublin Bay as set out in the UWWT Regs. The Study also seeks to relieve the overloading at the Ringsend

Treatment Plant while ensuring while catering for committed development to 2011 of zoned lands and resolving pollution and flooding risks within the existing networks. The study also seeks to ensure Ringsend together with other local WWTP's can accommodate the needs of existing catchments to 2031.

7.3 *Regional Planning Guidelines for the Greater Dublin Region 2010-2022*

This documents refers to the GDSDS and notes that the Study went through a Strategic Environmental Assessment (SEA). It also note that the current drainage infrastructure comprises of one major facility (Ringsend) and a number of smaller WWTP's throughout the County (Obserstown, Malahide Balbriggan, Swords etc.) In many cases the scale of the investment has only just kept pace with the levels of growth experienced. As a result the need for investment in new facilities to meet the RPG's strategy is both pressing and immediate as key existing facilities and networks are reaching capacity. Considering the complex issues and long lead in times for this infrastructure, the failure to move forward on this issue in the immediate future could curtail the ability of Authorities to deliver the RPG's for the GDA and by consequence the NSS. Continued investment is needed to ensure high quality standards to meet the WDF and to facilitate future investment and consolidation of the Gateway and major growth towns. Table 11 of the Guidelines (p.129) sets out the 'Critical Strategic Projects for Wastewater and Surface Water' to be carried out. The first Project on the list is - the expansion of the WWTP to its ultimate capacity. The second project is the identification of a site for a new Regional WWTP and Orbital Drainage network in North County Dublin.

7.4 *Dublin City Development Plan*

The Site is zoned Z7 'To provide for the protection and creation of industrial uses and to facilitate opportunities for employment creation'. 'Public Service Installations' are an acceptable use under this zoning objective.

Relevant policies as they relate to the development are set out in section 5.2.4.6 and are summarised below:

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

SI 44 To support the development of the Greater Dublin Regional Wastewater Treatment Plant, Marine Outfall and Orbital Sewer to be located in the Northern Part of the GDA to serve the Dublin Region as part of the GDSDS.

SI 45 To provide additional and improved wastewater treatment capacity by upgrading the Ringsend WWTP.

SI 46 In co-operation with other local authorities to implement the recommendations as appropriate, of the Greater Dublin Strategic Drainage Strategy, subject to funding being available.

It is also an objective of Dublin City Council (SI 0 75) In cooperation with other local authorities in the region to implement appropriate development management policies to prevent overloading of the wastewater infrastructure and consequent risk of pollution to natural waters.

Section 6.4.5 specifically relates to Dublin Bay. It notes that Dublin Bay is a major resource for the city requiring appropriate management. It contains three internationally recognised bio-diversity designations.

Policy GC 24 Seeks the continued improvement of water quality, bathing facilities and other recreational opportunities in the coastal estuarine and surface waters of the city and to protect the ecology and wildlife of Dublin Bay.

7.5 Eastern District River Basin Management Plan

Under the ERBD Plan the Liffey Estuary has been designated as being of 'moderate status' with the objective of reaching 'good status' by 2027

8.0 PLANNING ASSESSMENT

8.1 Strategic Requirement for Upgrade – Project Need

A fundamental question arises in assessing the application, and this question was highlighted during the oral hearing proceedings, it relates to whether or not the upgrade of the treatment plant and of the scale proposed is justified or whether or not it is more appropriate to invest elsewhere in terms of future requirements. This question is particularly pertinent in light of on-going proposals to construct a new regional wastewater treatment plant to serve the Fingal area.

8.1.1 Policy Statements

The Greater Dublin Strategic Drainage Study (GSDSDS) sets out the broad drainage requirements for the region to cater for the anticipated and/or assumed development of the GDA up to the year 2031. This document was completed in 2005.

The GSDSDS relies on the Regional Planning Guidelines (RPGs) and the National Spatial Strategy (NSS) in order to estimate the future projected population increases for the Greater Dublin Area. Studies in this regard have indicated a dramatic predicted growth population from 1.2 million in 2002 to just over 2 million in 2031 for the GDA region. New drainage infrastructure

recommended by the Study to cater for this growth is estimated to cost €2.4 billion. The main strategic components include:

- The upgrade of the existing drainage system
- The upgrade of the existing treatment plants to their ultimate capacity
- To construct a new regional treatment plant in Fingal
- To provide a new orbital sewer to the western suburbs of Dublin and the adjacent catchments in Meath and Kildare.

It is therefore clear that in overall strategic terms the GSDSDS envisaged both the upgrading of the Ringsend wastewater treatment plant and the provision of a new plant in Fingal. Both objectives therefore can be said to be mutually supportive within the overarching context of the Plan as opposed to being mutually exclusive projects in that only one or other project will be proceeded with. As previously stated the GSDSDS does not provide any detailed information in terms of the justification for infrastructure requirements set out for the region. Rather the report concentrates on a review of local authority drainage practices in five key areas namely

- New development
- Environmental management
- Climate change
- Inflow/infiltration and exfiltration
- Stormwater flows to basements

A set of detailed technical documents have been produced to ensure consistency of approach in relation to delivering drainage infrastructure between all local authorities. The GSDSDS report has been through a public consultation process and has been the subject of an SEA prior to being adopted by the local authorities as the blueprint for future drainage requirements up to 2031. It is clear from this document that the expansion of the existing plant at Ringsend to its ultimate capacity together with a new regional plant in Fingal is envisaged to cater for the drainage requirements of the region. The study is unambiguous in terms of Ringsend, it seeks to expand the plant to its ultimate capacity in tandem with developing a new regional plant for the GDA. This point was indeed highlighted by the applicants during the course of the oral hearing (see evidence of Mr. McManus and closing statement by Mr. Dodds on behalf of Dublin City Council).

The Regional Planning Guidelines for the Greater Dublin Area make reference in Section 6.5 to the GSDSDS. It notes that in drainage terms infrastructure has only just kept pace with the scale of growth in the region. As a result the need for new investment in new treatment facilities to serve the GDA is both pressing and immediate and key existing facilities are reaching capacity. Failure to move forward on this issue in the immediate future will severely curtail the ability of the authorities to deliver the Regional Planning Guidelines for the GDA and by consequence the NSS. To this end key strategic investment priorities in relation to wastewater infrastructure are identified in Table 11 of the Guideline.

The highest priority listed in Table 11 is the expansion of the Ringsend wastewater treatment plant to its ultimate capacity. The second highest priority in the list is the identification of a suitable site for the new Greater Dublin Regional Drainage Project – Regional Wastewater Plant, Marine Outfall and Orbital Drainage System and the development of this plant and network connections. These Guidelines likewise have been through the statutory public consultation process and have been adopted by the Regional Authority and thus feed into the local authorities policies and strategies which form part of the Greater Dublin Area. To this end it can likewise be concluded that the proposal to upgrade the Ringsend wastewater treatment plant is fully in accordance with the policies, provisions and objectives set out in the Regional Planning Guidelines for the Greater Dublin Area.

It is also clear from the Dublin City Council Development Plan that the proposed development is fully in accordance with the policy and objectives set out in relation to drainage infrastructure. In this regard I specifically refer the Board to policies SI 45 SI 46 and GC 24 and objective SIO 75.

The policy statements referred to above are unequivocal terms of their support of the extension of the Ringsend WWTP.

8.1.2 Existing Loadings at the Plant

The EIS essentially justifies the expansion of the plant on the grounds that the design arising to the first phase of the upgrade and expansion has been exceeded notwithstanding the fact that the initial stage sought to cater for a PE loading up to the design year of 2020. The wastewater treatment plant was in its first phase designed to treat an average inflow load of 1.6 million. Information contained in the EIS reveals that currently the wastewater treatment plant is catering for a load of in and around 1.8 million p.e..

It is likely that the design criterion under the first phase was exceeded over such a relatively short timeframe as a result of the economic boom experienced in the decade subsequent to 1997. The measured flow as indicated in Section 3.4.3 of the EIS shows a significant increase in the average daily flows from an average of 330,116m³ per day in 2003 to an average of 470,480m³ per day in 2008. This represents an increase of 42% over this 5-year period. In 2008 the average daily flow at 470,480 was 95% of the design flow which is stated at 492,480. The hydraulic load therefore in 2008 was operating at 95% of its capacity.

In terms of organic loads the 2008 loadings for the treatment plants are indicated on the table below.

Table 4: Organic Loads at the Wastewater Treatment Plant 2008

Year	BOD ⁴ loading (Ave) kg/d	BOD Design Load kg/d	Ave Load as a % of Design load	TSS Loading (Ave) kg/d	TSS Design Load ⁵ kg/d	Ave Load as a % of Design load
2008	107,400	98.4	109%	101,100	112.5	111%

It is clear from the above that the average daily organic loadings exceed the average loadings anticipated for the design year of 2020 in the case of each of the pollutant parameters listed⁶.

8.1.3 Future Projected Loads

Despite the economic downturn the latest 2011 census indicates that the population of Dublin increased from 1.187 million to 1.273 million, an increase of almost 86,000 or 7.2%. The population of Meath (a small portion of which is served by the Ringsend wastewater treatment plant – Dunboyne, Clonee, Ratoath etc.) under the same census period increased from 162,000 to 184,000, an increase of 21,300 or 13.1%. According to the information contained on file approximately 15% of Meath’s wastewater is treated at Ringsend.

The above figures sit comfortably with the regional population targets set out in Section 4.3 of the Regional Planning Guidelines for the Greater Dublin Area. The Guidelines point out that the NSS prescribed a population growth target for each region which is integrated and set out for each local authority within the region. The population targets for the Greater Dublin Area are set out in Table 5 of the Guidelines and are summarised below.

Table 5: Populations Projections Contained in the RPG’s for the Greater Dublin Area

	2008	2010	2016	2022
Dublin	1,217,800	1,256,900	1,361,200	1,464,200

It is clear therefore that under the population projections set out in the Regional Planning Guidelines for the Greater Dublin Area and the actual census figures for 2011, that the projected load in residential terms is at least expected to continue to increase over the period to 2022. Commercial, institutional and industrial loadings are more difficult to predict and would possibly be more sensitive to economic conditions. Commercial and industrial loadings may

⁴ Design year 2020

⁵ Design year 2020

⁶ It may not be appropriate to make reference to nutrient loadings for the purposes of this analysis as presently the plant is not specifically designed to facilitate designated tertiary treatment (although obviously some nutrient removal particularly phosphate is removed during the primary and secondary treatment processes).

remain stagnant or even decline during periods of economic downturn such as being experienced at present. The economic decline of recent years appears to have been reflected in the measured loads to the wastewater treatment plant as indicated in Figure 4.3 of the EIS which are detailed below.

Table 6: Measured Loads at the Wastewater Treatment Plant 2008 to 2011

Year	2008	2009	2010	2011
Load (p.e)	1.79m	1.74m	1.81m	1.74m

However based on the population increase experienced over the last intercensal period and the future population projections set out in the Regional Planning Guidelines, it would not be unreasonable to assume that the continued demographic expansion of the Dublin area could result in increased organic and hydraulic loadings on a wastewater treatment plant that is already operating beyond its optimum design capacity.

8.1.4 The Regional WWTP Planned for Fingal

The last major consideration in strategic terms is the objective contained in both the Regional Planning Guidelines for the Greater Dublin Area the GDSDS and the local authority development plans to provide a regional wastewater plant for north County Dublin. Research work is still on-going in relation to this project. At the time of writing this report three preferred sites were identified in the preliminary assessment and these are currently being investigated further. The sites are

- Annesbrooks approximately 2.7 kilometres west of Lusk
- Newtown Corduff approximately 1 kilometre west of Lusk and
- Clonshaugh, approximately 2.2 kilometres east of Dublin Airport.

The capacity of the new regional plant has yet to be finalised but it is likely to be in the region of 700,000 PE. A question therefore arises as to whether the extension of the Ringsend treatment plant is necessary in the context of the provision of an additional regional wastewater treatment plant coming onscreen which will cater for a population equivalent of around three quarters of a million.

In terms of a timeline it is anticipated that the construction of the orbital pipeline and the wastewater treatment plant would not commence before mid-2017. The operational date is unlikely to be before 2019 and there is therefore, a considerable timeline envisaged before waste can be diverted from Ringsend.

Figure 4.1 of the EIS estimated the loadings beyond 2037 for a low population projections and takes into account anticipated diversions as a result of the coming on stream of the regional wastewater treatment plant in north County Dublin. The diversions are anticipated to take place over two phases around 2020 (c.350,000 PE) and again around 2030 for a similar amount. It is

anticipated that under a high growth scenario (1.4% per annum) the first diversion would extend Ringsend capacity to 2028 and the second diversion would extend the capacity of Ringsend to 2036. Under a low growth scenario the it is envisaged that the capacity at Ringsend would be extended to 2034 and 2045 under the two planned diversions.

I can only conclude therefore based on the policy statements in the GSDSDS, and the Regional Planning Guidelines for the GDA and the Development Plan which all make reference to the need for both the extension of the Ringsend Wastewater Treatment Plant and a new regional treatment in Fingal that on both projects are mutually supportive to cater for the drainage infrastructure requirements for the GDA and that the expansion/development of both facilities constitute official policy. Furthermore the current loadings experienced at the treatment plant exceed the design loadings under the first phase which were not anticipated to be surpassed until 2020. In addition, the likelihood of p.e. loadings continuing to increase based on recent population trends for the Dublin and surrounding area together with the anticipated population growth envisaged under the Regional Planning Guidelines that hydraulic and organic loadings on the drainage infrastructure in Dublin will continue to increase. Finally, the timeline envisaged from the coming on stream with any new regional wastewater treatment plant in the Fingal area is such that there is a need in the short-term to upgrade the Ringsend Wastewater Treatment Plant to the envisaged ultimate firm capacity of 2.1 million p.e.

8.2 Water Quality Issues

8.2.1 Baseline Information of Water Quality

For the purpose of clarity it is proposed to briefly outline the various water quality designations as they relate to the waters contained in the study area. The Board will be aware that the overarching legislation relating to the waters in question is the Water Framework Directive (2000/60/EEC) (hereafter referred to as the WFD). This is an umbrella Directive which seeks to prevent the deterioration of existing waters and seeks to achieve at least ‘good status’ for all waters by the year 2015 or where certain derogations have been justified to 2021 or 2027. The Water Framework Directive Classification of transitional coastal water in Dublin Bay and its estuaries carried out by the EPA have found that all waters in the study area have been found to be of “moderate” status in accordance with the criteria set out in Schedule 4 of European Communities Environmental Objectives (Surface Waters) Regulations SI 272 of 2009 (here after referred to as SI 272 of 2009 or the Surface Water Regulations. Furthermore in the case of all water bodies to which this application relates, a derogation has been put in place whereby the target date to achieve good status was extended to the furthest possible timeframe of 2027. This, according to the EIS was due to the location of the waterbody at the end of the catchment area.

The relevant environmental quality objectives as set out in Schedule 5 of S.I. no. 272 of 2009 for both transitional and coastal waters are summarised in the table below.

Table 7: Nutrient Parameters Specified in SI 272 of 2009

Nutrient Conditions	Transitional Water Body	Coastal Water Body
Dissolved Inorganic Nitrogen	n/a	Good Status (0 psu ⁷) ≤ 2.6 mg N/l (34.5) psu ≤ 0.25 mg N/l High Status (34.5 psu) ≤ 0.17 mg N/l
Molybdate Reactive Phosphorous	0-17 psu ≤ 0.06 (median) 35 psu ≤ 0.04 (median)	n/a
BOD	≤ 4.0 mg/l (95%ile)	n/a

In addition to the above the River Liffey and Liffey Estuary are designated as sensitive waters on the Urban Wastewater Treatment Regulations 2001 (S.I 254 of 2001) as amended by SI 440 of 2004. Under these Regulations requirements for discharges from wastewater treatment plants into sensitive areas will require no more than 1 mg/l of total Phosphorous for agglomerations in excess of 100,000 P.E. and a limit of 10 mg/l total Nitrogen for the same size agglomerations.

The Bathing Water Regulations of 2008 (S.I. no. 79 of 2008) requires the following parameters to be adhered to in order to achieve appropriate status for bathing waters.

Table 8: Bateria Limits set out in SI 79 of 2008

Parameters	Excellent Quality	Good Quality	Sufficient Quality ⁸
E-coli	250*	500*	500**
Intestinal Entreococci	100*	200*	185**

* by 95% or more samples

** by 90% or more of samples

8.2.2 Hydrometric Model

Before going on to assess the anticipated impact of the proposed development on the water qualities in the estuarine areas on Dublin Bay in general, it is proposed briefly for the purposes of this assessment to outline the model and the parameters and data on which the model is based. The model, which is referred to in the EIS as the ‘MIKE 3’ model was developed by the Danish Hydraulic Institute and was established for the Dublin to Waste Energy Study. Mr. Hans Jacob Vested presented evidence regarding details of the model. The main components and assumptions contained in the model are set out briefly below.

It is a ‘constructed 3D mesh based model’ reliant on bathymetric surveys undertaken in Dublin Bay. The purpose of the model is to (a) assess the impact

⁷ PSU relates to Practical Salinity Units – sea water has PSU of 35. (See SI 272 of 2009)

⁸ Poor quality for microbiological enumerations are worse than the “sufficient quality” values

of the primary discharge and water quality parameters in the Bay (b) to compare the anticipated plume with relevant water quality standards to enable a preliminary assessment of the impact from the potential long sea outfall location particularly in the context of designated water quality sites.

Two scenarios were modelled.

- Existing conditions at the current outfall location - 5.14 m³/s.
- The proposed outfall at 9 kilometres to see a discharge of - 6.9 m³/s.

A 15 day period was chosen to encapsulate a full spring/neap tide cycle. The model also took into consideration the buoyancy effects due to salinity and stratification within the water horizons in the Bay and took into consideration the average run flows from all the major rivers flowing into the Bay. Present and future average pollutant concentrations from the Ringsend wastewater treatment plant were modelled for the purposes of the assessment.

8.3. Assessment of the Impact of the proposal on Water Quality in Dublin Bay

8.3.1. Existing situation

8.3.1.1 Molybdate Reactive Phosphate.(MRP)

Under the Surface Water Regulations SI 272 of 2009 the MRP limits set out for transitional waters at 35 PSU (corresponding to sea water) should not exceed a concentration of 0.04mg/l. It is clear from figure 8.25, 8.26 and 8.27 as well as the actual readings recorded by Dublin City Council in 2008 and 2009 as set out in Table 8.17 of the EIS that the Liffey Estuary and the Tolka Estuary in the vast majority of cases exceed the limits set out for transitional waters as stipulated in the Regulations. The highest readings, above 0.088mg/l, are primarily confined to the inner bay on the coastal area to the south-east of Dollymount Strand. The highest concentration is indicated on Table 8.17 of the EIS 0.155 mg/l is, not surprisingly, located just downstream from the discharge pipe associated with the wastewater treatment works. This is almost four times the limit permitted for transitional waters.

It is also clear that the Tolka Estuary contributes significantly to MRP values in the inner bay and in particular the Clontarf area. MRP values above the permitted limit are recorded for all points within the Tolka Estuary within only one or two exceptions.

The MRP levels for Dublin Bay are much lower generally between 0.013 and 0.027 mg/l. The Board will note however that there are no limits set out in SI 272 for MRP limits for coastal waters. Therefore the MRP levels recorded in the outer bay area are not strictly relevant in terms of compliance with legislative requirements under the Water Framework Directive.

It is clear from the model stimulations of the existing plume for MRP contained in figures 8.25 and 8.27 that large areas of the inner bay extending north-eastwards beyond the north wall and along the coast of Dollymount Strand to the coastal waters adjacent to the south-western side of the Howth Peninsula exceed concentrations of 0.04mg/L MRP on a regular basis. The Board should however have regard to the fact that the graphic representation in the plume is in many cases higher than the actual values recorded in Table 8.17 in the EIS. This is because the model shows the highest potential concentration of MRP in the water at any one time and is not representative of a particular point in time.

8.3.1.2 *Dissolved Inorganic Nitrogen (DIN)*

While phosphorous (and in particular ortho-phosphate or MRP) can be the eutrophic catalyst in freshwater, nitrogen is the main catalyst eutrophication and algae growth in the case of coastal waters. For this reason is often referred to as the limiting factor for coastal waters. For this reason there are no statutory limits set out in the Regulations for DIN for either freshwater bodies or transitional water bodies. The limit set out in the Surface Water Regulations (SI 272 of 2009) for DIN for coastal waters is 0.25mg/l. Table 8.17 indicates that high levels of DIN were recorded in the Liffey Estuary and the Tolka Estuary ranging from 0.28mg/l to 1.95mg/l. The critical threshold for DIN relates to levels in Dublin Bay (where a limit of 0.25mg/l DIN applies). Table 8.17 again indicates that all levels of DIN recorded in the Dublin Bay Coastal Waters are currently below this limit. The highest level recorded is 0.122 mg/l are approximately 50% of the limit set out under the Surface Water Regulations and this is recorded at the South Bull Buoy, circa 1 kilometres south-east of the Poolbeg Lighthouse.

The plume dispersal modelling for DIN under existing conditions shows that under a worst case scenario, the highest potential concentration involves a plume extending north-east from the South Bull Wall covering the north-west portion of the Bay from Poolbeg lighthouse to the Howth Peninsula and almost entirely enveloping the Bull Island. The highest concentration of a DIN (above 0.65mg/l) covers the inner bay area (i.e. the entirety of the transitional waters – where there are no parameters set for DIN under the Surface Water Regulations) and more importantly the designated coastal waters along Dollymount Strand and the Bull Island Lagoon and along to southern and south-western coasts of the Howth Peninsula. Again I would reiterate that the maximum concentration as indicated in figure 8.24 shows the highest potential concentration of DIN in the water at any one time and is not represented of particular point at time. Thus the maximum concentration indicates that the designated coastal waters around Bull Island and the Howth Peninsula could or are likely to exceed the parameters set out in the Surface Water Regulations at some point in time.

8.3.1.3 BOD

The Surface Water Regulations (SI 272 of 2009) require that the BOD levels do not exceed 4mg/l for transitional water bodies (the Board will note that the EIS refers to this per limit applying to coastal water bodies. This is incorrect the Regulations clearly state that BOD limits apply to transitional waters only). The existing survey results are set out in Table 8.17 of the EIS indicate that BOD levels in the freshwater rivers (Liffey and Tolka) the transitional waters and the coastal waters consistently range between 2.0mg/l to 2.4mg/l which is lower than the parameters set out on the Surface Water Regulations SI 2009 for both freshwaters and transitional waters. The Board will note that in the case of freshwater bodies the Surface Water Regulations SI 272 in 2009 set a limit value of 2.6mg/l and that the limit recorded in freshwater bodies in both the Liffey and the Tolka (an Islandbridge Heuston Station Drumcondra Bridge etc. are very close to this level). However this is not of particular concern for the current application as the outfall from the wastewater treatment plant currently discharges into transitional water downstream of the freshwater, therefore if any breaches of the freshwater limit occurs, it can no way be attributed to the WWTP at Ringsend.

The model indicates (see figures 8.28, 8.29 and 8.30 in the EIS pp154-55) that the existing BOD plume is confined to a very localised area around the outfall pipe where levels would exceed the limits set out in the Surface Water Regulations (above 4 mg/l). All other BOD levels outside this localised plume within transitional waters are below 4mg/l. Under a maximum concentration the plume extends eastwards from the outfall pipe in a narrow corridor to the immediate north of the South Bull Wall.

8.3.1.4 E-Coli

E-coli limits are not specified under the Surface Water Regulations but are specified under the quality of Bathing Water Regulations 2008 (SI no. 79 of 2008). The standards set out for e-coli are set out in Table 8.3 of the EIS (see above above in this assessment). I note that no figures for E-coli are presented in Table 8.17 of the EIS – which set the surveys undertaken by Dublin City Council. The plume dispersion model in the EIS however indicates that under a worst case scenario (Figure 8.33 p.157) the plume is generally localised to the southern portion of the inner bay between the North Wall and the South Bull Wall and extends beyond these walls into the mouth of the outer bay which roughly coinciding with the outer boundary of the transitional waters. Under a maximum concentration scenario the highest concentration of E-coli (above 2,500MPN/100ml) is located along the South Bull Wall.

8.3.2 Post Development Modelling Scenarios

8.3.2.1 Molybdate Reactive Phosphate (MRP)

The hydraulic modelling scenarios, in the case where the outfall is relocated to the outer Bay, has a significant impact on MRP concentrations on the inner bay and in particular on the transitional waters where statutory parameters for MRP under the Surface Water Regulations SI272 of 2009 are assigned. A significant improvements will, according to the model accrue at the waters in the vicinity of Bull Island at Dollymount Strand. Elevated MRP levels above that permitted in the Surface Water Regulations, SI 272 of 2009 are still apparent in the estuarine areas of the Dodder, Liffey and in particular the River Tolka. However none of these can be attributed to effluent associated with the Ringsend wastewater treatment plant, but rather these elevated levels are due to loads/sediments to be carried by rivers flowing into the bay. There can be little doubt when comparing the existing and proposed plumes of MRP within the Bay, the relocation of the outfall will have a significant and materially positive impact on MRP concentrations in the Inner Bay and around Bull Island and more importantly in the waters which are designated as 'Transitional'. It is clear for the modelling exercise undertaken, that the Ringsend WWTP is by far the biggest single contributor to elevated MRP levels in the Dublin Bay Area. The relocation of the outfall significantly improves the water quality in terms of MRP concentration, so much so that, much of the designated transitional waters and indeed large swathes of designated coastal waters will experience concentration levels below those stipulated in the Surface Water Regulations. Those areas in the inner bay that continue to experience MRP levels above the parameters stipulated for transitional waters do so because of other sources of MRP which are not associated with the WWTP.

In terms of the relocated outfall into Dublin Bay, the plume model indicates that elevated concentration of MRP will extend in a north-south direction from the diffuser shaft. Under the midflow leap tide and low water leap the plume will not extend anywhere near designated Coastal or Transitional areas. It appears that under a worst case scenario at a maximum concentration, MRP levels may rise to 0.4 to 0.5 mg/l within a designated coastal water body to the immediate south of the Howth Peninsula. However as already stated there are no specified limits for MRP when applied to coastal waters and therefore none of the limits set out in the Surface Water Regulations are contravened.

It appears therefore based on the information contained in the EIS, and the plume dispersion modelling carried out as part of the EIA process, that the relocated outfall would result in a significant improvement and would reduce MRP levels in Dublin Bay. While exceedance of the levels specified under the Surface Water Regulations S.I. of 2009 in transitional waters will still occur, these can be specifically attributed to sediment/pollutant loads contained in the rivers discharging into the Bay as opposed to loads associated with the Ringsend wastewater treatment plant.

8.3.2.2 Dissolved Inorganic Nitrogen (DIN)

The model indicates that concentrations of DIN will significantly be reduced within the Inner Bay area although they will still remain high along the River Liffey, Tolka Estuary and Clontarf area. The elevated concentrations of DIN will be restricted to the area of the Bay which is designated as transitional waters. As previously stated there are no specific limits for DIN in transitional waters. And as such, while concentrations may remain high they will not contravene any standards sets out under the Surface Water Regulations (SI 272 of 2009). It is also apparent that while high values within the Inner Bay will be still apparent, they are considerably lower than the values currently being experienced at the wastewater treatment plant. Furthermore as in the case of MRP, high concentrations of DIN within the Bay cannot be attributed to the effluent from the wastewater treatment plant but rather the nitrogen loads discharged into the Bay from rivers namely the Liffey Dodder and Tolka.

In terms of DIN concentrations at the relocated outfall in the outer Bay area, the concentrations are considerably lower and in nearly all cases achieve 'high status' in the sample points within the designated coastal body areas. The simulation model run of the oral hearing indicated that at one point in time under a maximum concentration scenario, DIN levels would exceed 0.25mg/l within the boundary of a designated coastal water zone to the south-east of the Howth Head Peninsula. However it is important to highlight the fact that the 'mean' values of DIN will not be exceeded in this designated coastal water body. Concentration levels above limits specified in the Surface Water Regulations may occur at one specific point in time but will not constitute 'mean' or 'median' values in terms of DIN concentration. The modelled average DIN values post development are indicated in Table 8.18 of the EIS with the exception of Point C08 which is located 150 metres from the diffuser site and (therefore is located outside a designated coastal water body) where concentrations are modelled at 0.29mg/l, All other average DIN concentrations are estimated to be less than 50% of the limits set out in SI 272 of 2009.

8.3.2.3 BOD

The model predicts that there will be no plume associated with BOD in either the inner bay or in the vicinity of the diffuser shaft (see Figures 8.47 to 8.52 pp.171 to 173 of the EIS). BOD levels within the Bay will be imperceptible and will be below the 4mg/l limit which is the standard for transitional waters. The Urban Wastewater Treatment Regulations 2001 also specify that in the case of any wastewater discharge, regardless of any designation associated with the receiving waters, a BOD level of 25mg/l should not be breached. This level is generally not breached under the existing operation of the WWTP and will not be breached under the proposed development.

8.3.2.4 *E-coli*

The model predicts that with the relocation of the diffuser shaft 9 kilometres out to Dublin Bay that the existing E-coli plume along the South Bull wall would be eradicated in its entirety and this is indicated in Figures 8.53 and 8.54 of the EIS (p.175). Small levels of E-coli will still be apparent in the upper reaches of the Liffey and the Tolka Estuary, but these concentrations will in no way be associated with Ringsend WWTP. Under a worst case scenario with a maximum concentration, the plume at the diffuser shaft would extend in a north-south direction and may extend into the designated coastal water body to the immediate south of the Howth Peninsula. However the model indicates that the plume will not extend to bathing beaches and recreational areas designated under the Bathing Regulations⁹. (The Board will note that the Bathing Directive under Article 2 specifies bathing water as water which bathing is explicitly authorised by the competent authorities by each member state or bathing is not prohibited as is traditionally practiced by large numbers of bathers. The model indicates that E-coli concentrations of above 500CFU/100ml do not extend to the coastal areas where bathing traditionally takes place.

8.3.3 *Concluding remarks in relation to Water Quality*

In conclusion therefore based on the evidence presented in the EIS and at the oral hearing, I am satisfied that in terms of water quality, the proposed works to be carried out and in particular the relocation of the outfall into Dublin Bay will result in significant improvements in water quality standards in the inner part of Dublin Bay and in the vicinity of Dollymount Strand and Bull Island particularly in terms of DIN and MRP. Furthermore the relocation of the outfall will result in water quality standards for transitional waters and coastal waters which will for the most part comply with the parameters set out under the Surface Water Regulations SI 272 of 2009, the Bathing Regulations S I79 of 2008 and the Urban Wastewater Treatment Regulations SI 254 of 2001, and SI 440 of 2004. I further consider that any exceedance in the parameters specified particularly for transitional waters in the inner bay area, are as a result of anthropogenic and geomorphological processes in the catchment areas of the rivers upstream which flow into Dublin Bay and are not associated with the Ringsend wastewater treatment works.

⁹ The Board will note that the Bathing Directive, under Article 2 specifies bathing water as 'water which bathing is explicitly authorised by the competent authorities by each member state or bathing is not prohibited as is traditionally practiced by large numbers of bathers'.

8.4 Appropriate Assessment and Potential Impacts on Designated European Sites

The Board will note that there are a number of sections of the EIS which deal both directly and indirectly with the issues relating to the impact on designated sites and more particularly Appropriate Assessment. These include Chapter 8 which relates to water quality, Chapter 9 which relates to marine flora and fauna, Chapter 10 which relates to terrestrial flora and fauna. In addition Appendix I of the EIS specifically sets out

- (a) An Appropriate Assessment of the proposed long sea outfall
- (b) An Appropriate Assessment of the installation of the underground electricity supply cables at the compensatory grassland to the south of the site and
- (c) An Appropriate Assessment of the installation of an underground electricity supply cables and road resurfacing/improvements at Irishtown Park.

8.4.1 Potential Impact on SAC's

The designated sites within 15 kilometres of the existing wastewater treatment plant and outfall together with the proposed outfall are indicated in Figure 10.2 of the EIS. The qualifying interests associated with each of the designated sites are set out in Table 10.1 of the EIS. Based on the hydraulic modelling set out in Chapter 8 of the EIS together with the discussions which took place during the oral hearing it can be concluded that it is likely that the following Natura 2000 could potentially be affected by the works to be undertaken.

South Dublin Candidate SAC

- Conservation objectives:
- *To maintain the favourable conservation status of the mud flats and sand flats not covered by seawater at low tide.*

North Dublin Bay SAC

- Conservation objectives
- *Mud flats and sand flats not covered by seawater at low tide.*
- *Annual vegetation of drift lines*
- *Salicornia and other annuals colonising the mud and sand*
- *Atlantic salt meadows*
- *Mediterranean salt meadows*
- *Embryonic shifting dunes*
- *Sifting dunes along the shoreline*
- *Humid dune slacks*
- *Petalophyllum Ralfsii*

In terms of potential impact on the SAC the proposed development will not in any way alter or impact upon a hydrography, tidal movements or currents within Dublin Bay. The average outflow of 5 cubic metres per second or the peak outfall of 11 cubic metres per second from the wastewater treatment plant

are negligible in the context of the existing flows in the River Liffey which serves a catchment area of 1,300 kilometres. It is not anticipated that the proposed development will in any way impact on dune formations. The proposal will not impact on the morphological evolution of the Bay or the morphological dynamics of the Bay. No evidence has been put forward in either the written submissions to the Board or in the Oral Hearing that the proposed development will impact on the hydrodynamics or the morphology of the Bay.

Whether or not the proposed changes in water quality and nutrient concentrations will specifically impact on the flora of qualifying interest referred to in the North Dublin Bay SAC is not altogether clear from the EIS. Changes in nutrient content could potentially impact on the salicornia and other annuals which colonise the mud and sand flats in the intertidal area. Changes could also potentially occur in the growth and distribution of the salt meadows referred to in the SAC. These points were specifically put to Mr. Richard Nairn Consultant Ecologist at the oral hearing and he stated that it is not anticipated that the changes in nutrient content in the waters of the Bay would impact in any way on these species. There is no evidence to suggest that the anticipated changes in the nutrient content of the waters within the Bay will in any way effect the plants referred to above. The NIS on the proposed long sea outfall states that changes in water quality are not likely to have any significant negative effects on the Annex I habitats (namely the intertidal habitats and salt marshes associated with Bull Island). It is noted that the nutrient rich water plume extends only marginally over the salt marsh habitats in the North Dublin Bay SAC. The time of which these habitats are submerged is limited and as such the water quality parameters cannot be modelled. It is stated that the potential impact will be neutral or possibly somewhat beneficial to Annex I habitats in the vicinity of the outfall.

Some discussion took place during the proceedings of the oral hearing as to whether or not the Kish Bank is likely to be designated as a candidate Special Area of Conservation at some future date. It is suggested that the Bank which is located to the west of the proposed discharge location may be considered for designation as an important sand bank covered by shallow water which could accommodate potentially important marine flora and fauna. During the course of the discussions which took place at the oral hearing it was indicated that the proposed discharge location was unlikely to adversely impact on any potential qualifying interests associated with the Kish Bank due to the separation distances involved and the fact that any plume associated with the diffuser shaft would dissipate along a north-south axis predominantly due to currents and therefore would not impinge upon the Kish Bank.

8.4.2 Potential Impact on SPA's

With regard to Special Protection Areas, it is considered that the proposed development has the potential to have a much more significant impact on the SPAs situated in north and south Dublin Bay, particularly North Dublin Bay. There are two SPAs which could be impacted upon as a result of the improvement or reduction in nutrient value in the water quality. These are:

- The South Dublin Bay and River Tolka SPA and
- The north Bull Island SPA.

The qualifying interests of these SPAs are listed elsewhere in my report (see section 2.4) and for this reason will not be listed here. It is however worth highlighting in this assessment that Dublin Bay is of international importance for wintering water birds. Four water bird species were recorded in internationally important numbers during the low and mid-tide counts in Dublin Bay. These included the Light Bellied Brent Goose, the Knot, the Black-tailed Godwit and the Bar-tailed Godwit.

The issue of nutrient reduction on the feeding patterns of birds of special conservation interests are issues raised in both the Bird Watch Ireland submission and the submission from the Department of Arts, Heritage and the Gaeltacht. It should be highlighted that in the case of both submissions, it is not argued that there is a proven categorical adverse impact between water quality improvement and reduction in food sources for birds of conservation interests. Both submissions acknowledge that the relationship between nutrient reduction and the impacts on the benthic ecosystem is difficult to assess but suggests that the EIS could have gone further in its investigations of these issues.

In terms of nutrient reductions which could adversely or potentially effect food sources for the birds of qualifying interest it is likely that DIN and MRP would be the most significant. Dissolved Inorganic Nitrogen (DIN) can stimulate or enhance the development, maintenance and proliferation of benthic organisms and can result in the eutrophication of estuarine and coastal marine waters. In significant concentrations it can also induce the occurrence of toxic filamentous matted algae growth and chlorophyll levels which provide important nutrient sources for benthic organisms and marine ecosystems. The reduction in DIN has most potential to affect the coastal waters around the Bull Island Lagoon and Tolka Estuaries. MRP likewise can facilitate eutrophic waters particularly in fresh and transitional waters and for this reason any reduction in MRP particularly in the transitional waters in the inner bay could likewise potentially impact on benthic production and marine ecosystems and therefore food sources within the inner bay.

Notwithstanding the fact that BOD would provide additional organic matter the existing BOD plume in the vicinity of the outfall, the plume extent of elevated concentrations is so small, that it is unlikely to have an effect on food sources within the overall Bay area. Furthermore any increase in BOD levels arising from the existing discharge is concentrated in a linear stretch of water to the immediate north of the South Bull wall. This is located outside the boundary for the Sandymount Strand/Tolka Estuary SPA and therefore is unlikely to directly affect the SPA.

The principle diet of the birds of qualifying interest that frequent the north and south Dublin SPAs are set out in Table 10.11 of the EIS (Page 262) and according to the EIS *“a number of common species make up the key food resources of the wild fowl waders and sea birds that comprise the qualifying*

interest of the SPAs in Dublin Bay. Of particular importance are the molluscs cerastoderma, mytilus, hydrobia and macoma, the polychaetes hediste, arenicola and a number of smaller species, the fish ammodytes, eelgrass zostera noltii and green algae enteromorpha and ulva”.

In evaluating the potential impact of the reduction in nutrient enrichment on the feeding patterns of birds, the EIS primarily relies on various academic studies¹⁰.

These studies have been carried out both nationally and internationally and specifically relate to bird diets. Based on the research carried out the following conclusions are drawn:

- The most tolerant species which forms part of the avian diet is the *macoma balthica* and this is known to occur in the Tolka Estuary. Because of nutrient enrichment along the River Tolka it is not anticipated that this area will experience any significant reduction in organic enrichment.
- While some studies suggest that there is a link in the effluent discharge and the micro algal growth, the EIS states that no direct link has been found in the stable isotope analysis.
- Studies also suggest that neither dissolved nitrogen nor particulate nitrogen signatures showed enrichment typical of sewage values. This implies according to the EIS, that no direct link has been found between the effluent discharge at the Ringsend wastewater treatment works and the growth of micro-algae in the Bay. For further information on this item the Board should specifically consult the papers submitted by Professor James Wilson and Dr. Andrew Jackson entitled “*Upgrading of Dublin SDP end sources for micro algae Ectocarpus*”.
- It is also argued that changes in the water bird population are caused by a large number of variable factors (climate change, disturbance, feeding patterns, weather conditions, increases in potential predators etc.) of which water quality is only one factor.
- Some of the more important prey species of the waders that occur in internationally important numbers are sensitive to over enrichment of the sediment. Thus the population of the species would be expected to benefit from a reduction in nutrient discharges to intertidal areas of Dublin Bay.

It appears therefore based on best scientific knowledge that a link between nutrient reduction in receiving waters and impact on food sources for wader and winter fowl birds has not been determined. The observations submitted essentially argue that the applicant in the EIS has not adequately demonstrated that the proposed reduction in nutrients will not result in a deterioration of food sources for some of the birds of conservation status.

¹⁰ In advance of the oral hearing the planning inspector requested the main academic studies to be submitted at the hearing and these studies are attached in a separate folder to this report.

I would consider that the EIA carried out on behalf of the applicant has endeavoured to consult and assess best scientific knowledge with regard to the link between water quality and the feeding regimes of the bird of conservation status and found that no such definitive link has been determined. It is difficult to ascertain to any definitive extent what if any changes in the bird populations of the SPAs could be directly attributed to nutrient reduction and thus feeding resources for the birds in question. The complex trends in bird populations in the Bay are evidenced by the fact that despite the overall improvements of water quality in the Bay over the last decade which culminated in Dollymount Strand being awarded a blue flag, nine species of birds have increased or stayed stable in the Dublin Bay area while nine species of birds populations have decreased in numbers. This evidence does not suggest that improvements in water quality have resulted in any material or discernible impact overall on the bird populations in the Bay. In fact if one were to look at bird population trends over the previous decade, any impact could in fact be said to be neutral. A similar conclusion could be derived in relation to the lagoonal and intertidal mud flat areas which are most likely to be potentially adversely affected in terms of nutrient enrichment. While apparent declines in wild fowl species including shell duck and teal have been recorded, increases in knot, sanderling, red shank, green shank and turnstone have also been recorded. Likewise in terms of wader species using the intertidal habitats, while oyster catchers, golden and grey plovers and black-tailed godwits have decreased. Increases in Brent Geese, widgeon and shoveler have been recorded. The recorded figures therefore would support the view that it is difficult to draw concrete conclusions in terms of water quality improvements and feeding habitats for birds, and it also suggests that water quality may be only one in a numbers of factors which affect bird populations in the Bay.

It is also reasonable to conclude in my view that the intertidal mud flats which are particularly close to the Tolka Estuary and the inter-lagoonal areas to the rear of Bull Island receive significant nutrient loads from rivers flowing into the Bay. The importance in these nutrient loadings are illustrated in the fact that notwithstanding the relocation of the outfall shaft the dispersion modelling that under post-development scenario significant loads of DIN and MRP will still be discharged into the inner Bay area and to a lesser extent the southern lagoonal area of Bull Island. These intertidal mud flats and sand flats coincide with the highest density of waders recorded in the Bay (see Figures 10.6 and 10.8 of the EIS). The modelling carried out in the EIS clearly indicates that while the DIN plume is restricted considerably in a post-development scenario, particularly during mid-flood neap tide and low water neap tide, the concentrations of DIN from the inner Bay are still pronounced in a post-development scenario. The area around the Tolka Estuary in the south Bull hosts the highest concentration of wader birds. Where a significant reduction in DIN occurs in the area immediately north-east of the north wall (which experiences a decrease in DIN from greater than 0.65mg/l to below 0.25mg/l), this area coincides with relatively low densities of wader birds. Thus the areas which currently host the greatest concentration of birds generally coincide with areas that will experience the lowest reductions in DIN and thus these birds are likely to be

least effected in terms of changes in the benthic ecosystem and food sources for birds.

The EIS makes reference to various papers that were produced in relation to avian diets in the Dublin Bay area (as already stated most of these papers were submitted at the oral hearing) it is noted that a number of common food sources make up bird diets. These diets are outlined in detail in Tables 10.12 – 10.14 of the EIS. The EIS makes reference to numerous studies which show no discernible decreases in the benthic communities result from a consequent reduction in nutrient levels. 12 estuarine areas were studied in the UK and another important study was carried out concerning cockle populations at Wadneeze in Holland. Studies showed that a reduction in organic loadings can result in the colonisation of more pollutant tolerant species and therefore any predicted reduction in DIN in Dublin Bay could in fact improve secondary benthic production in these inter-tidal areas.

I can only conclude therefore that the EIS has adequately evaluated based on best scientific knowledge. Based on this scientific knowledge, there is no evidence to suggest that any reduction in nutrient value will have adverse impacts on bird populations of qualifying interest for the designated SPAs within the Bay.

Finally it should be borne in mind that any nutrient reduction proposed under the current application seeks to comply with the provisions of the Surface Water Regulations, Bathing regulations and Urban Wastewater Treatment Regulations, all of which seek to implement the over-arching objectives of the Water Framework Directive. While it may be a moot point as to whether which European Directive should take precedent, the Birds Directive or the Water Framework Directive, I would refer the Board to a document prepared by the *Director General Environment of the European Commission* which looks at frequently asked questions regarding the links between the Water Framework Directive, the Birds Directive and the Habitats Directive. This document was submitted on behalf of the applicants during the closing submissions at the oral hearing. The last paragraph on Page 10 of this document specifically deals with a question similar to that posed from the current application before the Board, i.e. which takes precedent securing the objectives of the WFD or the Birds Directive.

It states: -

“Under the Water Framework Directive the aim is to reduce nutrient to levels compatible with good ecological status as the species occurring in good ecological status need certain abiotic conditions to survive. Under the Habitats Directive the aim is to protect the presence of protected species and habitats occurring in the Natura 2000 Sites. Favourable conservation status is clearly linked to the species “maintaining itself on a long-term basis as a viable component of its natural habitats”. This means measures under the Bird Habitats Directive should aim at the protection of the sustainable population of those species but should not be interpreted as meaning “as many birds as possible”.

Thus it would appear that the over-arching objective under the Habitats and Birds Directive is to maintain and protect sustainable populations of birds as opposed to create environments (to increase nutrients) to attract as many birds as possible to the SPA. I would therefore conclude that in this instance based on the scientific evidence available, that implementing the objectives of the Water Framework Directive would not in any way compromise or undermine the conservation objectives of the designated Special Protection Areas designated under the Birds Directive”.

In conclusion I consider the Appropriate Assessment undertaken as part of the application and in particular the Natura Impact Statements submitted in relation to the separate aspects of the proposed development which could potentially impact on the integrity of a designated site which are contained in Appendix I of the EIS, and in light of the foregoing assessment of this information, it is reasonable to conclude on the basis of the information available, including the best scientific knowledge available that the proposed development individually and in combination with other plans and projects would not adversely affect the integrity of European Sites (Site Code Nos.: 004024, 000210, 004006 and 000206) in view of the specific conservation objectives relating to the above sites.

8.5 Long Sea Outfall Location

A question could arise as to the appropriateness of placing a long sea outfall beyond designated areas set out under the Water Framework Directive and as such, bypassing the requirements set out in the Directive in relation to nutrient control and adherent to water pollution parameters generally. This issue not was presented in any of the written observations to the Board in relation to the proposal, although some more general discussions did take place in relation to this matter during the proceedings of the oral hearing. However for the purposes of a comprehensive and holistic assessment, the appropriateness of placing the outfall pipe beyond designated waters should be considered and evaluated. The EIS considered discharge into nutrient sensitive waters of the Liffey Estuary. The Liffey Estuary was designated a sensitive waterbody under Schedule 3 of SI 254 of 2001. Under the Urban Wastewater Treatment (Amendment) Regulations 2004 (SI 440 of 2004) more stringent parameters were placed on Nitrogen (N) and phosphorous (P) discharges. For agglomerations of greater than 100,000 a limit of 1 mg/l P and 10 mg/l N is required in any discharge. Section 5.8 of the EIS assesses the discharge to the Liffey Estuary with enhanced nutrient removal. This issue was also discussed in some detail during the proceedings of the oral hearing with the cross-examination of Mr. Robert Gaudes on behalf of Dublin City Council by Mr. Joe McCarthy on behalf of The Sandymount and Merrion Residents Association (SAMARA). Mr. Gaudes pointed out that if nitrification and de-nitrification units were to be incorporated within the confines of the existing plant, that the overall capacity of the plant could not exceed 1.49 million P.E. The chemicals required in order to precipitate phosphorous out the wastewater would also create significant amounts of sludge. This sludge would be more difficult to treat because it would incorporate a greater heavy metal content.

The possibility of accommodating an expansion of the wastewater treatment plant on contiguous lands at the proposed incinerator site was also discounted by the applicant on the grounds that the incinerator could well proceed and there is an extant planning permission on the adjacent site for such a facility. The possibility of constructing additional sequencing batch reactor tanks on top of the existing two levels of same batch reactors was also discounted on the grounds of structural integrity. Similar concerns ruled out the possibility of constructing sequencing batch reactors over and above the existing storm water tanks to the north of the main treatment plant. Therefore for reasons relating to the expansion of the capacity of the plant as well as the physical limitations within the plant, it was considered inappropriate to provide tertiary treatment within the confines of the existing waste water treatment plant.

While long sea outfall is considered the most expensive in terms of capital outlay, it was deemed to be more advantageous and attractive in terms of operating costs and residual asset value. It was also deemed to be more advantageous in terms of reliability as any additional unit processes for denitrification or of phosphorous removal would make the plant more liable to break down or malfunction. The incorporation of a lesser number of unit processes would also assist in the operation and maintenance of the wastewater treatment plant. Nutrient removal would also give rise to greater energy requirements and greenhouse gas consumption and more expensive in terms of chemical consumption (alum, methanol or polymers).

Finally in terms of water quality, while it is envisaged that the various alternatives considered for tertiary treatment would comply with the requirements the Urban Wastewater Treatment Regulations and the Surface Water Regulations, nevertheless, they would add additional nutrient/pollutant loadings to the estuary and the inner bay (albeit within the parameters set in the above regulations). The concentration of the pollutant parameters are indicated in the modelling results at the existing outfall under Section 8.3.4 of the EIS). It is anticipated that a similar distribution of nutrients albeit on a lesser concentration will be discharged within the Bay. There is no doubt that the removal and relocation of the outfall pipe to a location beyond the designated waters would be more beneficial in achieving nutrient removal in the inner Bay.

It appears therefore that the incorporation of secondary treatment for the long sea outfall is more advantageous in environmental, technical and in cost terms than any alternative which involves nutrient removal on site in order to comply with environmental standards.

Some discussion took place during the course of the oral hearing as to whether or not the most optimum location for the outfall pipe and diffuser shaft had been chosen within the bay. Four outfall locations were originally modelled (B1 to B4, see Figure 8 of EIS, Page 95). During the course of the discussion questions were asked as to why B1 or B2 were not chosen over the preferred location of B3. In relation to B1 which is a location circa 2 kilometres to the south of B3, it is considered that there was very little to choose between the two sites. However B1 was perhaps in closer proximity to an area of water which is

more intensively used for recreational purposes than B3. In terms of potential interference with port traffic, it was considered that neither B1 nor B3 would interfere with port traffic associated with Dun Laoghaire and Dublin Port respectively. The applicant stated that Dublin Port had no objections to the location of the diffuser outfall at B3.

In relation B2, the observers suggested that the location of the outfall at point 13 kilometres beyond the existing outfall would pose less of a risk to designated waters than the preferred location at B3. It is apparent from the modelling exercises undertaken that the preferred location does not pose a risk to the integrity of the designated waters and therefore B2 would have no real advantage over B3 in this regard. It was also pointed out by Mr. O'Connor (Marine Ecologist on behalf of Dublin City Council) that B2 as well as being more expensive would also be located closer the Kish Bank which may be designated as a European Site at some future date and therefore the proposal could potentially impact on the ecological integrity of the Kish Bank where the diffuser shaft is located at B2. Mr. Gaudes (Project Manager on behalf of Dublin City Council) also pointed out that B2 would require an additional 4 kilometres of piping costing in the region of €40 million and may result in additional geological investigations, as the geology in the area beyond the Beaufort Bank would need to be investigated to a greater extent.

Finally in relation to the outfall pipe, the Inspector asked during the proceedings of the oral hearing whether or not it was considered to lay the outfall pipe on the seabed. Mr. Gaudes on behalf of the applicants indicated that this alternative discounted principally for navigational reasons. It was pointed out that currently Dublin Bay is dredged to a depth of 7.8 metres and this is likely to be increased in the coming years in order to facilitate ships of bigger drafts. Furthermore, the pipe itself is a large pipe circa 5 metres in diameter. The requirement to maintain adequate depth to facilitate ships together with the diameter of the pipe would require dredging in the order of 20 metres in depth. This could create engineering problems if impediments were encountered on the sea bed and could also result in significant disturbance to marine ecology and marine archaeology. For this reason it was decided to place the proposed tunnel within the bedrock.

8.6 Traffic Issues

8.6.1 Construction Traffic

In terms of general traffic comments, I consider that the site is well located in the context of the strategic roads surrounding the site. Access to and from the site will be provided via the Pigeon House Road/White Bank Road/South Bank Road before linking up with the R131 at the Sean Moore Roundabout. This roundabout provides access onto the East Link Toll Bridge and beyond onto the North Quays Port Tunnel and M50. It is anticipated that the HGV cordon currently in operation in the city centre will prohibit HGV traffic associated with the development entering the city centre and therefore all traffic from the site will access onto the M50 via the Port Tunnel. The site's location within the

port area ensures that the site and the surrounding is well served in terms of road infrastructure and this road network currently accommodates large volumes of traffic, particularly HGV traffic associated with the port.

It is apparent that the main traffic impact resulting from the development will be derived from construction traffic. In terms of construction, the envisaged haul route is northwards via the Port Tunnel and to the M50. To facilitate easier access to the extended area of the wastewater treatment plant a temporary construction access will be formed at the south eastern corner of the site.

Existing baseline flows were evaluated and baseline junction capacity analysis was undertaken as part of the EIS. The highest ratio of flow to capacity (RFC) was experienced at the East Wall Quay/North Wall Road (adjacent to the O2 arena) where an RFC of 0.589 was recorded. The RFC at the Sean Moore Roundabout and the White Bank Road/South Bank Road junction was 0.34 and 0.194 respectively.

The construction trip generation will be derived from

- Removal of spoil from the tunnel inlet shaft.
- The construction of the wastewater treatment deep aeration shafts on site.
- The transportation of construction materials to the site.
- Construction staff trips.

It was made clear at the oral hearing that the construction associated with the deep aeration shafts will only take place during normal business hours.

Table 9: Vehicular Tips Associated with Construction

Activity	Total Trips per Day	Vehicle Type	Haulage Travel Period	Trips per hour
Spoil Removal	135	HGV	12am-7 pm 10am-4pm 7pm-12am	16
Delivery of Construction Materials	66	HGV	10am-4pm	22
Staff	150	Car/Van	7am-9am 4pm-6pm	51 (peak hr)

The overall construction is likely to take place over a three year period. The capacity assessment for the key junction over the three year period is set out in Table 12.9 of the EIS and is summaries below.

Table 10: Capacity Analysis of Key Junctions in the Vicinity of the Site

Junction	Year	Highest RFC	Queuing Delay s/veh	Queuing Length no. of veh's
East Wall/North Wall Road	2013	0.637	7.2	1.7
	2016	0.662	7.8	1.9
Pigeon House Rd/Sean Moore Junction	2013	0.373	6.0	0.6
	2016	0.373	6.6	0.6
Whitebank Road /SouthBank Road	2013	0.261	10.2	0.4
	2016	0.269	10.2	0.4

It can be concluded therefore based on the figures in the EIS, that the impact of the proposal on the capacity of key junctions would be marginal during the construction period in the case of the development going ahead. Furthermore the optimum capacity of the key junctions (RFC greater or equal to 0.85) will not be impinged upon by the additional traffic generated during the construction phase.

Based on the analysis contained in the EIS, I am satisfied that the proposed development will not give rise to levels of traffic which would result in unacceptable congestion levels on the strategic road network. The information contained in Chapter 12 of the EIS in my view represents a realistic analysis of the potential impact in traffic terms. Having inspected the site and the road network surrounding the site and the volumes of traffic thereon, I would generally be satisfied that there is sufficient capacity particular at the Sean Moore Roundabout to cater for any increase in traffic resulting from construction. I further note that the EIS incorporated a sensitivity analyses for the proposal and as part of this analyses the cumulative effects from traffic associated with the construction and operation of the COVANTA Waste to Energy Facility which is located contiguous to the wastewater treatment plant (an additional 18 HGV trips in and out per hour). The sensitivity analysis also reduced the permitted spoil haulage period from 18 hours to 6 hours per day, thereby compressing the trips generated by the proposed development into a six hour as opposed 18 hour period. This would result in an additional 17 trips per hour during the construction period. Finally the sensitivity analyses included a scenario whereby the tunnel boring machine would operate at a rate of 30 metres per day as opposed to the anticipated rate of 16.5 metres per day. This would result in an additional 19 HGV trips per hour.

When the sensitivity test comparison is included (see Table 12.12 of EIS, Page 318) in the overall capacity assessment, it is clear that the ratio of flow to capacity is still well within the optimum capacity limits of 0.85 RFC in the key junctions assessed.

The proposal also envisages that HGV activity hauling spoil from the site will not be permitted during peak hours (0700 hours to 1000 hours and 1600 hours to 1900 hours) thereby ensuring that the proposed development will not be adding traffic to the wider road network at critical peak periods.

A particular area of concern raised by the observers during the course of the oral hearing is the potential impact of HGV traffic on the amenity of walkers and pedestrians using the South Bull Wall amenity area. I inspected the Bull Wall area. I carried out my site inspection on a warm sunny day in early September and noted that the South Bull Wall area is heavily used by walkers, runners and anglers etc. I would acknowledge that there is a potential for vehicular pedestrian conflict particularly as the vehicles involved will be HGV vehicles hauling spoil from the tunnel shaft site. Under a worst case scenario, these trips could amount to 38 HGV trips per hour. In order to address this potential conflict Dublin City Council proposed to provide a designated crossing area along the Pigeon House Road leading from Irishtown Nature Reserve to the South Bull Wall. It is also proposed to erect a railing along the existing footpath on the northern side of Pigeon House Road leading to the South Bull Wall. This will facilitate the secure segregation between HGV traffic and pedestrian. During the course of the oral hearing photographs were submitted by Ms. Lorna Kelly on behalf of SAMARA which indicated that previously a footpath was located along the southern side of the Pigeon House Road leading to the South Bull Wall. However, the footpath was gradually encroached upon by sand and marine scutch grasses associated with the nearby strand. Dublin City Council indicated that it would investigate the opportunity of reinstating the footpath along the southern side of the Pigeon House Road as all parties agreed it would be a safer alternative than requiring pedestrians to cross the Pigeon House Road in order to gain access to the footpath along the northern side of the road. I do note however that the reinstatement of any footpath along the southern side of the road may encroach or impinge upon designated the South Dublin SPA and therefore would be required to be the subject of an appropriate assessment screening exercise. As such it would be inappropriate in my view to address this issue by way of condition.

There can be little doubt that the increase in traffic along this section of the Pigeon House Road will impact on the amenity of recreational users of the Strand and the South Bull Wall. However with the mitigation measures proposed by Dublin City Council, I do not consider that the increase in traffic will pose a significant risk in road safety terms. I am also cognisant of the fact that the traffic associated with the construction of the tunnel shaft is temporary and will not adversely impact on the long term amenity of the area. I consider the amenity benefits associated with the development over the long-term in terms of improving water quality in the area would outweigh any temporary adverse impact on the amenity of recreational uses of the area and as such any adverse amenity impact would not constitute reasonable grounds for refusal in my opinion.

The NRA has also commented that the proposed development should not in any way compromise or impact upon any future route for an Eastern-Bypass of the city. It is difficult to make any definitive comment or assessment on the potential impact of the proposal on any route alignment of the eastern bypass as no firm route options or route alignments have been prepared in this regard. A feasibility report on an eastern bypass of the city which was undertaken in 2007 concluded that an eastern route was technically feasible and that a route corridor from Dublin Port to the M50 at Sandymount is the most suitable route

for this bypass. Three route options were considered in the feasibility report all of which passed to the west of the wastewater treatment plant, the closest of which is estimated to be some 150 metres to the west of the treatment plant and some 850 metres to the west of the tunnel site shaft. It is not envisaged therefore that the proposed development will in any way affect or compromise any of the route options currently being considered for eastern bypass route.

8.6.2 Operational Traffic

I do not consider that the proposed development presents any traffic problems during the operational stage. The proposal will give rise to negligible increases in traffic over and above that associated with the existing wastewater treatment plant. The EIS states (Section 12.5) that currently 55 staff are employed at the existing plant. The proposed works will not result in any increase in the number of staff being employed at the wastewater treatment plant. It is anticipated that with the expansion of the plant existing HGV deliveries and transportation of sludge off-site will increase by approximately 17%. Currently the site generates approximately six HGV movements on and off site per day. The proposal will generate an additional two HGV movements per day which is negligible in the context of the existing traffic in the overall Port area.

8.7 Noise Impacts

8.7.1 Air Bourne Noise

As with traffic, noise is more likely to have a potentially greater and significant impact during the construction rather than the operational phases. When evaluating the potential impact, it is important to differentiate between airborne noise which is more likely to have ramifications for residential amenity, and underground noise which could potentially impact on marine fauna. The EIS methodology relies on a noise prediction model based on the “Bruel and Kjar Prediction Package”. The sites where construction activity is to take place are located within a built-up area in close proximity to industrial and port-related facilities and in reasonably close proximity to heavily trafficked arterial roads most notably the R131. As such background noise levels are likely to be high on a fairly consistent basis.

The nearest noise sensitive locations are the residential dwellings to the east of the Sean Moore Roundabout and dwellings to the immediate north, near the junction of Pigeon House Road and South Bank Road. These residential areas are located just less than one kilometre away. Other potential noise recipients include the dwellings located circa one kilometre to the southwest of the site along Beach Road in Sandymount. Despite being slightly further away, these dwellings are just as likely to be potentially impacted upon in terms of noise generation principally due to the fact that the intervening area between the wastewater treatment plant/tunnel shaft and these noise sensitive locations comprise of open parkland and open water. Noise propagation can travel more effectively over such terrain and particularly over open water.

Dublin City Council has a noise monitoring station at Irishtown Stadium at Ringsend. Results indicate that a noise level of 55.7 dB(A) (L_{den}) are recorded on average at this station. For the purposes of the baseline study for this assessment, additional noise studies were carried out at four locations at the vicinity of the site.

- Irishtown Nature Park footpath – to the south of the site.
- Pigeon House Road to the northwest of the site.
- Pigeon House Road at the Sean Moore Roundabout.
- Sandymount Road at the southern corner of Sean Moore Park.

The additional survey results indicate a noise level (L_{Aeq} – 30 minutes) ranging from 55.5 dB(A) in the case of Irishtown Nature Reserve to 70 dB(A) in the case of Sandymount Road near Sean Moore Park during the daytime. As such they exceed the desirable targets set out in both the EPA Guidelines for Noise Activities and the Dublin City Noise Action Plan both of which stipulate a daytime noise level of 55 dB(A) (L_{Aeq}). The background noise measurement locations are indicated in Figure 14.4 (Page 372) of the EIS.

The principal noise generating elements of the construction phase are:

(a) The construction activities within the existing wastewater treatment boundary - is likely to involve pile driving and drilling if the deep shaft aeration tanks are to be constructed.

The EIS merely states that due to the enclosed nature of the site and the remoteness of the site from residential areas, it is anticipated that the work undertaken at the wastewater treatment plant will not adversely impact on the nearest noise sensitive locations to the immediate west of the Sean Moore Roundabout and along Beach Road and Sandymount. I would consider that there is a certain amount of justification in the above statement having regard to the presence of large buildings immediately adjacent to the proposed wastewater treatment plant, most notably the sequencing batch reactors on two levels. Perhaps more importantly in terms of noise sensitive locations, the presence of Irishtown Nature Reserve and the planted berm located on the reserve provides effective noise attenuation barriers to the immediate south of the construction site. Nevertheless I would have considered it appropriate that a detailed noise isopleth map be presented in the EIS demonstrating potential noise levels based on the modelling exercise carried out.

It is acknowledged however that the intervening land uses between the wastewater treatment plant, together with the presence of busy arterial roads, and in particular the Sean Moore Road and the Beach Road in Sandymount will assist in subsuming or masking any noise generated during the construction period at the wastewater treatment plant.

(b) The tunnel inlet shaft - likewise has the potential to generate significant levels of noise during the construction period. The works to be undertaken will

comprise of the excavation separation and transfer of material offsite. The principal noise sources during the construction phase of the tunnel will include:

- Sheet piling.
- De-watering pump.
- Excavator.
- Concrete pump.
- Dump trucks.
- Crane movements.
- Road trucks.
- The tunnel boring machine (the latter will only be a generator of significant noise during the initial construction works at ground level).

The likely noise generation from this equipment referred to, has been for the purposes of the EIS, derived from a data base set out in BS 5228 and the sound power sources are set out in Table 14.9 of the EIS. Noise levels (in terms of power source) range from 90 – 127 dB(A). The potential for noise generation is therefore deemed to be significant. The potential impact of the proposal is somewhat attenuated by the fact that the shaft inlet site is located almost one kilometre further east of the sewage works and therefore almost 2 kilometres from the nearest noise sensitive locations in terms of residential dwellings. Furthermore the nature of works will ensure that beyond initial stages, a significant proportion of the noise generating activities will be located underground as the tunnel shaft progresses. This will significantly reduce noise generation at ground level.

A noise prediction model contained in the EIS is based on a worst case scenario where all equipment referred to above is being operated simultaneously. It indicates that noise levels at the site boundary may reach 70 dB(A) for a short period of time. Figure 14.8 of the EIS indicates noise generated from the tunnel shaft will not exceed 45 dB(A) at the nearest residential locations to the west.

- (c) Road Traffic Noise – in terms of road traffic noise, it is not anticipated that noise levels will be duly affected as a result of the additional traffic generated by the proposed development, particularly on the main arterial routes. The greatest impacts will be on the roads closest to the site which currently experience relatively low levels of traffic, i.e. those roads on the Poolbeg Peninsula, Pigeon House Road etc. The traffic generated by the proposal will be more diluted on the already busy arterial routes which lie in closer proximity to the nearest noise sensitive receptors. In terms of trip assignment, all construction traffic will be directed onto the heavily traffic roads via the East link Road, East Link Bridge, North Quays and Port Tunnel.

In terms of overall traffic levels on the main arterial routes, the noise impact will be negligible and this is indicated on Figures 14.9, 14.10 and 14.11 of the EIS (pp. 380 and 381). The increase in traffic derived from the proposed development over a typical lunchtime would be in the order of 2.5 to 3% on these arterial routes. Therefore the contribution of noise generated by

construction traffic in terms of overall traffic noise is negligible in the context of the figures presented.

The impact in terms of noise during the night time period will be more significant in my view. The traffic figures contained in the EIS (Section 12.4.8.5) indicate that a minimum two-way traffic flow HGV recorded on the R131 (to the west of the East Link Toll Plaza) was 14 HGV between 1430 hours and 1530 hours. The 24-hour operation of the construction would generate a maximum of 16 HGV trip per hour. Mr. Gaudes (project manager on behalf of Dublin City Council) indicated that the extension works at the wastewater treatment plant would only take place during normal working hours and therefore the overall number of HGV trips per hour at night time may only amount to 10 HGVs per hour. Nevertheless, this would represent a significant increase in HGV traffic during the night time period and could constitute and near doubling of the amount of noise generated by traffic at this location. While a doubling of traffic on a particular road may be deemed to be significant in traffic terms, in overall noise terms, it would amount to an increase in sound pressure levels of approximately 3 dB(A). Such an increase is generally perceived in noise terms to be inaudible or imperceptible.

An important point to be kept in mind in assessing the noise associated with this application is the fact that background noise levels in close proximity to the nearest noise sensitive locations, i.e. the houses along Beach Road and the residential areas to the west of Sean Moore Roundabout are generally deemed to be high - in the region of 56 dB(A) by day and 46 dB(A) at night. It is not considered that the noise levels generated by the constituent activities to be carried out would have a significant effect on noise. The noise model predicts that the anticipated impact resulting from the works to be undertaken at the nearest noise sensitive locations are likely to be in region of 45 dB(A) (between 1 and 2 kilometres away from the source). Having regard to the existing background noise levels, the impacts are deemed to be imperceptible. I estimate the increase in overall noise levels resulting from the construction activities to be in the region of 0.5 dB(A)¹¹.

Notwithstanding my general conclusions, that is - that the proposed development will give rise to a negligible noise impact, I do however consider that there are a number of weaknesses in the EIS in relation to the noise analysis. As already pointed out details of any noise model run for the construction of the wastewater treatment plant extension was not included in the figures contained in the EIS. In this regard, it makes accumulative impact assessment in terms of noise virtually impossible to compute and evaluate. Furthermore, I note that the EIS itself did not estimate the cumulative impact of the proposal in noise terms where construction works at the two construction sites were being undertaken simultaneously, together with the additional traffic which would be generated from the construction works on the adjoining roads. A cumulative assessment would give a better indication of the overall potential

¹¹ Where the sound pressure level difference between two sources is circa 10 dB(A) the additional level to be added to the higher level is approximately 0.5 dB(A).

impact of the proposal in terms noise. This would obviously represent a worst case scenario.

Furthermore it is noted that the EIS does not evaluate the extent to which the noise generated by the proposed activities would give rise to tonal or impulsive noise. It is likely that impulsive noises will be generated by machinery (such as pile driving, pumping, etc. or indeed by traffic) (sirens associated with HGVs reversing etc.). While the impulsive and tonal nature of the on-site manoeuvring of vehicles may not propagate over large distances. Impulsive noises such as pile driving could have a more significant impact. Both the EPA Guidelines and British Noise Guidance Document, BS 4142 recommend the application of a 5 dB(A) correction (i.e. penalty) where tonal or impulsive noises are likely. This rating value (L_{ART} Value) is not referred to in the EIS. It should also be borne in mind that the propagation characteristics of an impulsive noise is likely to be accentuated over an open area such as Sandymount Strand. For this reason any pile driving or other construction activities should not be permitted during night time as this could impact on the residential amenity of residents living along the Sandymount Coastal Area. I note that the applicants proposed to work on the tunnel outlet shaft on a 24-hour basis. I would recommend that the Board include a condition prohibiting the tunnel excavation works and the tunnel boring machine from operating outside normal working hours until such a point as the shaft is excavated to a point 10 metres below ground level in order to safeguard the amenities of people in the area.

During the course of the proceedings of the oral hearing the inspector put a number of questions to Mr. Eugene McKeown, Noise Consultant on behalf of Dublin City Council in relation to the applicability of apply standards for BS 4142 having regard to the site's location in a mixed residential and industrial area. Mr. McKeown indicated that these standards are most appropriately directed towards assessing generated from industrial activities and not construction activities. He also suggested that the NRA Guidelines in relation to construction noise would be more applicable in this instance and pointed out that noise levels of up to 70 dB(A) L_{Aeq} over one hour are generally deemed to be acceptable during construction activities. He anticipated noise levels even if they were considered cumulatively under a worst case scenario are very unlikely to be anywhere near 70 dB(A) L_{Aeq} over one hour at the nearest noise sensitive location. The existing high background noise levels particularly due to heavy road traffic in the area will significantly shield or screen any additional noise generated during construction activities. I would anticipate that the increase in daytime noise levels is unlikely to be in the order of one or perhaps two decibels which already stated is generally deemed to be inaudible. This is unlikely therefore to give rise to noise complaints.

Finally in relation to noise, I note that Mr. Handy on behalf of SAMRA during the proceedings of the oral hearing criticised the noise model on the grounds that it did not adequately assess the potential noise impact on noise receptors along the R131 further south of Sean Moore Park, i.e. the Sandymount Road. I do not anticipate that there would be any significant impact for these receptors having regard to the fact that the noise generation activities are likely to be up

to 2 kilometres from the receptors and furthermore it is not anticipated that any traffic associated with the proposed development will travel southwards along the R131 in the vicinity of these houses. Any potential impact in terms of noise is likely to be more localised and centred on the residents in the immediate vicinity of Sean Moore Park and the immediate west of the Sean Moore Roundabout.

In conclusion, while I would have a number of criticisms of the noise section of the EIS, I would nevertheless be satisfied that due to the separation distances involved between the proposed works and the nearest residential houses together with the high background noise levels – primarily due to traffic, that the impact on amenity in terms of increased noise levels would be negligible.

No noise issues will arise as a result of the operation of the extended plant. Neither deep shaft aeration tanks or sequencing batch reactors will give rise to material increases in noise levels that would propagate far beyond the site boundary.

8.7.2 Underwater Noise

Underwater noise has the potential to impact on marine mammals in the bay area. The impact would be localised and will arise as a result of the construction of the outfall diffuser shaft. The properties of underwater sound propagation are very different to the properties of airborne sound propagation. This is explained in detail in the EIS under Section 14.2.2.1 to 14.2.2.4 (pp. 362 to 368 of EIS). It is noted that ambient noise levels underwater are Omnipresent and are derived from wind, waves, ice, marine life, earthquakes, distant shipping etc. Due to the difficulties in modelling noise transmission in Dublin Bay (because of the shallow water depth, the mixture of fresh and saline waters and variations in temperature and wind speed, it was decided appropriate to measure noise levels at seven different locations across the Bay). A noise source was used for the survey, namely a drilling rig and audible recordings were plotted at various distances from the source (see Table 14.8 of the EIS). The survey indicates that from 300 metres from the source, noise levels were reached background noise levels and hence there is no significant decrease in noise levels as one moves beyond 300 metres from the noise source.

The EIS identifies the potential impacts during the construction phase as being the construction of the tunnel, the construction of the diffuser shaft and the construction of the outfall diffuser. The anticipated noise levels at the different frequencies are set out in Table 14.12 of the EIS. Based on literature it is suggested that permanent hearing damaging for high frequency cetaceans is 2 metres and in the case of pinnipeds 8 metres. It is extremely unlikely that any of the marine mammals will remain in close proximity while works are being undertaken. A 100 metre exclusion zone prior to start up will be implemented to ensure that no marine mammals will be adversely affected by the commencement of tunnelling operations. A number of questions were put to Mr. Brendan O'Connor, Marine Ecologist and Consultant on behalf of Dublin City Council in relation to the operation of such exclusion zones. He indicated

that a trained person will be located on the drilling rig throughout the commencement of operations and works will only be allowed to commence when this trained person is satisfied that there are no mammals within the exclusion zone. Once the tunnelling activity has commenced, it is unlikely that any marine mammals will remain in the vicinity of the works. Mr. O'Connor also indicated the trained personnel will be obliged to report any breaches in protocol not to the applicants, but to a higher authority (such as the NPWS or some other body). Furthermore the EIS sets out mitigation measures for drilling and blasting in Section 14.6.2.1 of the EIS. The only potential impact on marine life will result from the construction of the tunnel and diffuser shaft. The impact of the diffuser head during the operational period will be negligible in terms of noise and vibration.

8.8 Air Pollution and Odour Issues

8.8.1 General Ambient Air Pollution Considerations

A major concern expressed by SAMRA ensuring the proceedings of the oral hearing was the background levels of PM₁₀ in the Sandymount and Ringsend area. Mr. Joe McCarthy on behalf of SAMRA submitted ample evidence to the oral hearing at PM₁₀ standards have been breached on numerous occasions in recent years to the extent that they do not comply with the requirements set out and parameters set out in the Air Quality Standards Regulations 2011 (SI No. 80 of 2011). Schedule 11 of these regulations set out limit values for the protection of human health. In relation to PM₁₀ a parameter of 50 µg/m³ is not to be exceeded more than 35 times in a calendar year.

Mr. McCarthy submitted evidence from the EPA website which indicated that PM₁₀ exceedance occurs more than 35 times in a calendar year.

Mr. McCarthy also made reference to the air quality surveys published in the EIS for the proposed Waste to Energy Facility at Poolbeg and Dublin Port Tunnel Annual Air Quality reports. The information submitted by Mr. McCarthy indicated that while readings were not undertaken every day at a survey point, on a pro rata basis, exceedance of 35 days per annum were recorded every from 2003 to 2007 (see Table on Page 3 of letter addressed to Dr. Martin Fitzpatrick, Principal Environmental Health Officer, Dublin City Council submitted as evidence by Mr. McCarthy at the oral hearing). Mr McCarthy relied on EPA data submitted as evidence at the hearing which specifically related to particulate matter levels at Ringsend.

Mr. McCarthy also makes reference to the report prepared on behalf of An Bord Pleanála by Dr. Brian Broderick on 'Air Quality and Climate' in relation to the Dublin Waste to Energy Project. This report in its concluding remarks suggests that total baseline concentrations for PM₁₀ were underestimated in the model which was utilised to model air quality in the Waste to Energy EIS. This, it was argued in the oral hearing, supports the conclusions proffered by Mr. McCarthy on behalf of SAMRA that PM₁₀ standards are being breached

on a regular basis in the Ringsend area and exceed the limits set out in the Air Quality Regulations.

The EIS relies on the published data contained in the EPA website for 2011 which indicates that the annual mean concentrations of PM₁₀ were 23 µg/m³ and that the 50 µg/m³ exceedance limit was only breached 10 times in that year. When asked about the discrepancies in information submitted at the oral hearing, Ms. Dawn Keating, Air Consultant on behalf of Dublin City Council stated that the EIS utilised the published data on the EPA website as her baseline information, and that this was reasonable as the EPA website is the most reputable source on which to base future air quality predictions on. It was also pointed out the Dublin City Council has embarked on implementing measures set out in the Air Quality Management Plan which will seek to reduce ambient air pollution in the Dublin Area which will include PM₁₀ values in the Ringsend and Sandymount Area.

Based on the evidence submitted at the oral hearing, I consider that convincing arguments have been made and evidence produced which support the conclusion that PM₁₀ standards in the Ringsend area have been breached in excess of the 35 day limit in any calendar year and therefore background PM₁₀ levels are invariably higher than the published EPA data relied upon in the EIS. Notwithstanding this point, the critical issue in my view relates to the extent to which the proposed development will contribute to increased PM₁₀ standards in the area. There is no doubt that the construction works to be undertaken on site together with the transportation of this material off-site will contribute to additional particular matter deposition in the area. The key question is to whether or not any additional PM₁₀ contribution associated with the construction activities would be such as to warrant a refusal of planning permission in this instance on grounds relating to air quality. Air quality emissions were modelled in the EIS and this is set out in Section 13.5.2.1 of the EIS document (pp. 341-342). The increase in PM₁₀ or dust levels as a result of the works to be undertaken is listed in the EIS as being 'imperceptible' at all 10 monitoring points on the Poolbeg Peninsula¹². Likewise the 'Construction Impact Significance' in the EIS is described as 'Negligible' (see Table 13.16 of p. 343 of EIS).

The PM₁₀ values without the proposed construction works and with the proposed constructions are set out in Table 13.13 and 13.14 in the EIS respectively. It is clear in relation to particulate matter that at the receptors modelled (the most important being 1-5 because of the proximity to the works to be undertaken) the overall increase which can be specifically attributed to the construction work 0.02 – 0.12 µg/m³. The information as calculated by the model suggests that the increase in PM₁₀ levels which can be specifically attributed to works to be carried out under the current proposal are indeed negligible and imperceptible. Thus I can only conclude that while background concentrations in the Ringsend area may be in breach of the air quality standards and Regulations, however the proposed development will not in any

¹² For actual increases in µg/m³ anticipated as a result of the proposed development at each of the 10 monitoring locations compare Tables 13.13 and Tables 13.14 on page 342 of the EIS.

material or significant way contribute to PM₁₀ levels in the area. As such it would be inappropriate in my view to refuse planning permission for the proposed development based on any existing exceedance of air quality standards with specific regard to PM₁₀ levels.

Other parameters required to be examined under Air Quality Standards include Carbon Monoxide (CO) Benzene, Nitrogen Oxides (NO_x) and in particular Nitrogen Dioxide (NO₂).

With the exception of NO₂ the annual limit value for Dublin City has never been breached in the case of the other pollutants. Values contained in the EPA air monitoring report 2011 indicate that levels in relation to benzene and carbon monoxide are well below the limit values stipulated in the Air Quality Regulations. Nitrogen dioxide levels were breached once in 2009 at Rathmines in County Dublin and as a result of this breach, Dublin City Council and surrounding County Councils are required, in accordance with the provisions of the legislation, to draw up and adopt an air quality management plan in order to reduce levels of airborne pollutants in the city and surrounding area. This plan has been produced and the annual limit value for NO₂ was not exceeded in 2010. I am generally satisfied based on the information contained in the EIS that the proposed development will not result in any appreciable increase which would result in a breaching of the limit values for the air quality parameters listed as set out in the Air Quality Regulations (SI 180 of 2011). I further note that no specific concerns were expressed by the observers in relation to any of the air quality parameters other than PM₁₀ levels in the area.

Finally in relation to air quality, it should be noted that the EIS modelled a worst case scenario whereby all spoil would be transported by way of HGV vehicles from the site through the city road network. It was highlighted during the proceedings of the oral hearing that the applicant is currently involved in making an application to the EPA for a Dumping at Sea Permit which would result in a significant amount of spoil not all being disposed of by ship as opposed to road based transport. If such a permit were permitted, the impact of the proposed development in terms of air quality would be further reduced.

It should be a condition that wheel wash facilities and other such mitigation measures be provided for vehicles exiting the site and that all vehicle loads would be adequately covered when leaving the site. Road surfaces leading to and from the site should be wet swept on a frequent basis and details of these and other mitigation measures can be set out in any environmental management plan to limit the potential impact of PM₁₀.

8.8.2 *Odour*

The history of odour associated problems with the Ringsend Wastewater Treatment Plant have been documented and have been referred to in the EIS. The constant odour problems prompted a specific report to be prepared for the then Minister of the Environment, Heritage and Local Government, Mr. John Gormley. The Report was prepared by Mr. Brendan Fehily and a copy of the

report is contained on file. This report was prepared in October 2008. The main foul odour emanating from sewage treatment is hydrogen sulphide (H₂S) while other odourless substances such as mercaptans, volatile organic compounds (VOC) and ammonia also emanate from wastewater treatment plants. H₂S is generally regarded to be the most pervasive and can be detected at limits of 0.47 parts per billion (PPB).

It appears that much of the odour problems associated with the wastewater treatment plant were a result of conflicting stipulations set out in the original EIS for the Phase 2 upgrade and the contract documents signed for the upgrading of the Ringsend Wastewater Treatment Works. The EIS standards to requirement for H₂S at the site boundary of 5 parts per billion (which equates to approximately 10-11 odour units) whereas the contract documents required that *“the work shall operate such that the concentration of hydrogen sulphide in the atmosphere at any work site boundary does not exceed 100 micro litres per square meter at any one time”* which equates to 100 parts per billion or between 200 and 210 odour units.

Since 2005 significant improvements have taken place in the form of odour abatement measures. These include: -

- Covering the channels leading to the Lamella Primary Clarifiers.
- Covering the primary lamella clarifiers.
- Incorporating more odour control units (mainly activated carbon and chemical treatment).
- Venting the head room in enclosed buildings through odour control units.
- The incorporation of bio-scrubbers and activated carbon control units upstream of the combined heat and power engines.
- The thermal treatment of odours through the thermal hydraulics process as part of the sludge treatment units.

The measures according to the EIS have reduced the overall odour unit production from 375,000 odour units per second (OU/s) to just under 100,000 OU/s. The reduction is indicated in Figure 13.1 of the EIS (Page 330).

The fact that odour issues did not feature prominently in any of the written submissions to the Board on this particular application indicates that significant odour problems have been resolved at the plant. Notwithstanding the above point, the Board will note that the issue of odour was brought up during the proceedings of the oral hearing and for this reason should be assessed in more detail below.

Presently, the single most significant odour source on site is the dryer building. Other major odour emitters include the biogas dampener, the thermal hydraulic processing building fans and the combined heat and power exhausts. Currently the maximum concentration at the boundary is estimated to be 379.3 odour units.

An isopleth map indicating a concentration of 10 odour unit at a frequency of 50 hours/year where all sources simultaneously and continuously emit odours is set out in Figure 13.2 of the EIS then “all” contour (indicated as a red line on the map) extends approximately 1.1 kilometres south and 0.7 kilometres to the east of the wastewater treatment boundary. It also extends eastwards to within the confines of the ESB power station. It does not however encroach upon any of the residential areas to the west of Sean Moore Roundabout or Sandymount.

As part of the works to be carried out under the current application, additional odour abatement measures are to be incorporated. These include: -

- The capture and treatment of the ventilation air from both dryer buildings.
- The provision of a 50% additional capacity from the main odour control unit.
- The capture and treatment of ventilated air from the screening buildings and the enclosure of the grit screening facilities having visited the site.

I would anticipate that the above measures and in particular the last two measures, will significantly contribute to odour reduction. The EIS anticipated that if all the above measures are implemented the maximum fence line concentration will be 30 odour units under absolute worst case scenario and that 10 odour units will be exceeded fewer than 50 hours per hour - an exceedance frequency in the 99.4 percentile. This is higher than the normal EU standard of 98 percentile (175 hours per year).

Having regard to the foregoing information and that the fact that there was no reference in any of the written submissions to the Board in relation to odour issues coupled with the fact that it is proposed to significantly improve odour abatement measures on site, I am satisfied that the proposed development will be acceptable generally in terms of odour emissions. Reduced levels of odour will constitute a significant positive amenity issue under the application proposed.

A question does arise however as to any condition in relation to odour that might be incorporated on any grant of planning permission issued by the Board in respect of the current application. I note that An Bord Pleanála, in previous decision in relation to wastewater treatment plants, have generally required a limit or parameter of either 3 odour units or 5 odour units at the boundary of a WWTP. This issue generated significant discussion during the proceedings of the oral hearing¹³. In response to some questions posed by the Inspector, Mr. Gaudes on behalf of Dublin City Council suggested that conditions which required a compliance rate of 3 or 5 odour units and the boundary could not be complied with in the case of the current application. He suggested that any conditions which required more stringent standards than 10 odour units are

¹³ For further details of the discussion I refer to Sections 43 – 46 of the recordings of the proceedings of the oral hearing on the evening of the first day of the oral hearing

essentially unenforceable as all olfactory methodology to detect odour levels of less than 10 UO is very unreliable. He also pointed out that currently the sequencing batch reactors on site generate eight odour units at the boundary and that this level could not be reduced by retrofitting or by mitigation measures. He also suggested that while it may be possible to reduce odour limits to five odour units in the case of new build wastewater treatment plants in rural areas with considerably larger buffer zones. This he argues would not be possible in the case of the current wastewater treatment plant because of its urban location and its size. It was his professional opinion that any specifications below 10 odour units would be unreliable and would unenforceable.

Having given due consideration to this issue and having consulted guidance on the matter, I would recommend in this instance that the Board should consider specifying a limit of 10 odour units in the case of the current application. I base my considerations on the following: -

Firstly having consulted UK odour control guidance (see attached excerpt from guidance document “Odour Guidance for Local Authorities” March 2010, published by Department of Environment, Food and Rural Affairs), I note that Section 7.2.3 of this guidance document states *“it should be pointed out that planning conditions which attempt to control the odour impact of new STW are new facilities at existing STW should not be based on a limit expressed as a 98 percentile odour concentration of, i.e. 1.5, 3 or 5 odour units at the plant boundary or at the nearest sensitive receptor. Such a condition would not be enforceable because it could not be measured. Such low concentrations are problematic to measure and are certainly difficult to differentiate from other background odours which may be present in the air”*. This statement would seem support the arguments put forward by Mr. Geddes at the oral hearing.

Secondly, because of the processes being carried out in relation to sludge treatment etc. the main source of odour emission will be hydrogen sulphide (H₂S) as is the case with most wastewater treatment plants. The original EIS and in fact the current EIS seeks to limit the concentrations of hydrogen sulphide at the boundaries to five parts per billion. This equates to approximately 10.6 odour units¹⁴.

The World Health Organisation Air Quality Guidelines for Europe gives a nuisance threshold of 3.5 parts per billion for H₂S or 7.5 odour units. The Fehily Report produced on foot of previous odour issues at the plant further suggests (Page 48) that H₂S levels at the site boundary of five parts per billion H₂S “would certainly have eliminated any odour problems in the Greater Ringsend Area. Thus, under the current application and the EIS the objective to achieve an odour standard of five parts per billion H₂S (10 odour units)

¹⁴ I base this conclusion on the grounds that olfactory research has indicated that hydrogen sulphite is only detectable in approximately 50% of the population at concentrations of 0.47 parts per billion. Likewise most tachometry research sets a standard whereby odour sources are detectable in a sample by 50% of the population. This likewise equates to one odour unit. Therefore, five parts per billion hydrogen sulphite equates to approximately 10.6 odour units.

would it appear be acceptable in terms of limiting odour problems outside the site.

Finally I would reiterate that there is a generous separation distance between the wastewater treatment plant and the nearest odour sensitive receptors which are located in the residential areas almost 1 kilometre away.

In conclusion therefore I consider that the proposed development is acceptable in terms of in that it will not give rise to any adverse amenity issues in terms of odour and secondly, I consider it appropriate that if the Board intend to specify odour limits by way of condition that an odour unit limit of 10 odour units be attached in any grant of planning permission.

8.9 Contaminated Land

Some concern was expressed on behalf of SAMRA in relation to the nature of the material which may have to be excavated within the wastewater treatment plant and as part of the tunnel shaft for the outfall and as part of the proposed extension to the existing plant. This concern primarily related to the methodologies employed in sampling the soil and the fact that hospital waste was found in one of the samples.

In relation to the first issue, Mr. Handy on behalf of SAMRA made reference to the various analyses of the soil samples which are contained in Appendix O of the EIS. Reference is made to a number of Certificates of Analysis carried out by City Analysts Limited Environmental Laboratories, which stated that many of the samples were not accredited due to the use of incorrect sample containers. It appears from the evidence submitted Dublin City Council that a total of eight out of the 39 samples could not be accredited for this reason. It should be noted that there is no evidence to suggest that the samples undertaken did not comply with the Landfill Waste Acceptance Criteria (WAC), but were merely not accredited because of containers used in the analyses¹⁵. I would be satisfied based on the information submitted that reasonable and representative samples have been analysed for the purposes of assessing the nature of the soil. It is clear from the samples evaluated that the vast majority of samples can be classified as an inert waste in accordance with the standards set out in the Landfill Waste Acceptance Criteria. It is also very clear from the EIS that all material that requires disposal will be treated in accordance with the Waste Management Collection Permit Regulations and will be disposed of either at sea or at EPA licenced facilities. Likewise, if hazardous waste is encountered during the excavation it will be a requirement that it be disposed of at an appropriately licenced facility or exported. The mitigation measures in relation to the management of any contaminated material and soil disposal are set out in Section 16.7.1 of the EIS and the contract documents for the scheme will require specific mitigation provisions as set out in the EIS.

¹⁵ Samples were tested for the following parameters: - PH temperature conductivity, arsenic, barium, cadmium, chromium, copper, mercury, molybdenum, nickel, lead anatomy, selenium, zinc, chloride, fluoride, sulphate total dissolved solids, phenol index dissolved organic carbon, total organic carbon, PCBs, mineral oil, polycyclic aromatic hydrocarbons and acid neutralisation capacity.

With regard to hospital waste, reference was made on the observations at the oral hearing to the fact that the area surrounding the site was formerly used as a tip head. It is possible therefore medical and other hazardous material could be unearthed during excavation works. The same protocols in relation to dealing with such contaminated material would imply and these issues can be adequately dealt with by way of condition.

8.10 Visual Impact

While some concerns were expressed by the observers in relation to the visual impact, I do not consider that the visual impact associated with the proposal would be a significant consideration in determining the application before the Board. Concerns were expressed in general about the visual erosion of the Poolbeg Peninsula over recent decades with the expansion of port-related facilities and associated industries. The overall erosion of the Dublin Bay area through the expansion of port and related facilities is a bigger issue than that associated with the application currently before the Board. The wastewater treatment works has already been established on site and while the sequencing batch reactors constitute large dominant structures when viewed from vantage points in the immediate vicinity of the wastewater treatment plant, middle distance and longer views from Ringsend, Sandymount and the North Port area are dominated by the adjoining ESB site which include the two large Pigeon House Stacks and the now largely dormant buildings which formerly accommodated the generator station together with the newer gas turbine generation station which is also located within the ESB site.

The EIS presents a worst case scenario whereby new sequencing batch reactors are to be accommodated as part of the wastewater treatment plant extension. According to the photomontages submitted, the new SBRs will be of a similar size and scale to those which currently exist on site and therefore will represent a significant and dominant impact when viewed from the grasslands between the Irishtown Nature Reserve and the appeal site. This is indicated on Figure V04 of the photomontages. However, wider views from Sandymount Strand and Beach Road etc. are greatly obscured by the band of conifer and deciduous planting on the elongated berm of land which forms part of the Irishtown Nature Reserve to the immediate south of the WWTP. The photomontages submitted show that views of the sequencing batch reactor will be negligible from vantage points to the southwest looking across the Poolbeg Peninsula.

Views westwards from the South Bull Wall will not be altered as a result of any extension to the wastewater treatment plant. Any works carried out within the confines of the site will, from vantage points to the east, be obscured by the presence of the existing sequencing batch reactors.

A modest visual impact will result from the construction works associated with the tunnel shaft. The visual impact will essentially comprise of a gantry and one or two cranes within the construction compound. The visual impact is indicated on Figure V05 in the EIS. The adverse impact can be considered to

be negligible. Such gantry construction and associated cranes are typical for the Poolbeg Peninsula because of the existing port-related activity in the area. I would therefore conclude that the visual impact resulting from the proposed development would be negligible.

8.11 Impact on Recreation

It is not anticipated that the proposed development will have any adverse impact on recreation. It is important to stress that Dublin Bay is a high amenity area with a high number of scenic views walkways and natural interest areas, as well as being an important recreational area for water sports including bathing, fishing, kayaking, scuba diving and sailing etc. The proposed development will result in improved water quality and this will be beneficial to swimmers, sailors, scuba divers who are actively involved in water sports. There is a potential that the construction of the diffuser shaft could create an exclusion zone for sailors. However the EIS points out (Page 437) that the closest buoy which has been laid down for yacht racing by Dublin Bay Sailing Club is a distance of 2 kilometres away from the diffuser shaft. It is unlikely therefore that under any circumstances the proposed development will interfere with sailing activities within Dublin Bay. The potential for vehicular/pedestrian conflict for walkers and joggers etc. accessing the South Bull Wall has already been dealt with in the Section on traffic.

8.12 Interference with Port-Related Activities or Public Utilities

The issue of the location of the diffuser shaft within the bay was discussed during the course of the oral hearing having particular regard to the potential impact on shipping routes. The applicants have indicated that Dublin Port have raised no objection to the location of the diffuser shaft in the context of shipping lanes in and out of the port. The diffuser shaft will be located at a depth of 13 – 15 metres below the sea and therefore will not impact on the available draft depths for boats. In addition the tunnel will be located within the bedrock at a depth of at least twice that of the diameter of the tunnel. This will ensure against any potential bedrock subsidence associated with the tunnel.

The proposal likewise will not impact on any public utilities located within the bay as it will not traverse or interfere with any pipes lines or other utilities located on the seabed..

8.13 Archaeology

The only potential adverse impact in terms of archaeology relates to marine archaeology. The evidence presented by Ms. Aishlinn Collins on behalf of Dublin City Council indicates that there is scope for some archaeological finds within the vicinity of the diffuser shaft. Anomalies were found on the sea bed in the vicinity of the shaft. These will be investigated further prior to the construction phase. It is possible that in the case where any archaeological features of interest are uncovered, that the diffuser shaft may have to be relocated away from the archaeological find. The evidence presented by Mr.

Vested in relation to hydraulic modelling indicated that if a scenario were to arise whereby the diffuser shaft had to be relocated some metres away from the original intended point, this would have no adverse implications in terms of the dispersion plume. Mr. Vested indicated that a relocation of the diffuser shaft in the order of 500 metres would be required before any material impact would occur on the contaminant plume from the shaft. I consider that issues in relation to archaeology could be adequately dealt with by way of condition which ensures that monitoring of all works both terrestrial and marine will be undertaken under the supervision of an archaeologist licenced by the Department Arts, Heritage and the Gaeltacht.

8.15 Public Consultation Process

I have assessed the file in the context of the requisite legislation and I consider that the public notices are in order. It is noted that the Board requested the applicants to re-advertise public notice making specific reference to the fact that a Natura Impact Statement was submitted with the application. All appropriate prescribed bodies were also notified in relation to proposed development. All statutory requirements in terms public consultation have been met in that the competent authority in this instance accepted observations and submission in relation to the application and also invited observations and submissions during the proceedings of the oral hearing. Prescribed bodies and other consultees were invited to submit comments in relation to the scoping process which is carried out as part of the EIS.

In addition, the applicants according to the information contained in Section 2.6 of the EIS carried out non-statutory consultation by holding a number of public meetings in Howth, Clontarf, Dalkey, Dun Laoghaire and Ringsend areas. Presentations were also made to the Environment Engineering Strategic Policy Committee of Dublin City Council and the Southeast Area Committee in 2011. Advertisements were also placed in a number of local papers in relation to the proposed development and a leaflet drop of 20,300 homes, associations and local businesses was also carried out. In conclusion therefore I consider that adequate public consultation took place as part of the overall development.

A question also arose as to why observers were required to pay in order to submit observations to An Bord Pleanála in relation to the proposed development. In response to this issue Section 144 (1) of the Planning and Development Act, 2010 as amended *states that the Board may determine fees that can be charged subject to approval of the Minister in relation to any matter referred to in subsection 1(a) and a fee so as determined shall be made payable to the Board by any persons concerned as appropriate.* The Board will note that Section 1(a) includes subsection (j) which relates to the making of a submission or an observation under Section (inter alia) 226 of the planning and Development Act.

8.15 The SEVESO Directive

There are a number of SEVESO sites in the vicinity of the proposed extension. These include the proposed Waste to Energy facility which is located on the adjoining lands to the west. Article 12 of the SEVESO II Directive (96/82/EEC) provides that appropriate consultation procedures must be put in place so as to ensure that before decisions are taken, technical advice is available to the Planning Authority in respect of the relevant establishments. The Health and Safety Authority is the competent body to provide such advice. The Health and Safety Authority was a consultee during the Scoping Report prepared in the context of the EIS. A copy of the EIS was also sent to the Health and Safety Authority as a prescribed body in accordance with the provisions of Section 175 (4)(b) of the Planning and Development Act, 2000 as amended. The Health and Safety Authority did not submit a response or comments in relation to either the scoping of the EIS or did not comment on the EIS document. I can only conclude therefore that the Health and Safety Authority, being the competent authority in this matter have no objection in principle particularly in the context of the SEVESO Directive and in relation to Health and safety matters more generally.

8.16 Flooding Assessment

The issue of flooding did not present itself as a concern or an issue in either of the written observations to the Board or during the proceedings of the oral hearing. Nevertheless, as the current application is being made to the Board in the first instance, it is important that the issue of flooding be assessed for the purposes of determining the application as a whole. The main risk to the site due to its coastal location will be tidal or coastal flooding. A lesser impact is posed by the risk of fluvial flooding. The national Flood Hazard Mapping programme prepared by the OPW shows no record of historical flooding in the vicinity of the site. The nearest flood occurrences are associated with coastal flooding in the Clontarf area and fluvial flooding in the Donnybrook, Ballsbridge, Irishtown and Ringsend area. This was associated with the breaching of the banks of the River Dodder. Similar flood events have occurred in the vicinity of the Tolka River on the north side of the city (see Figure 4 of flooding report submitted with the original application to the Board).

The Greater Dublin Strategic Drainage Study recommends 0.5% AEP design flood level to be taken at 4.0 metres, which is a worst case scenario under a 1 in 200 year flooding event. The Dublin Coastal Flooding Protection Project identified the coastal stretch on the south side of the ESB Poolbeg Power Station including Pigeon House Road as an area at flood risk. The tunnel inlet shaft is in a defended area, (i.e. behind an embankment) but if the embankment were to be removed, the site would also be a flood risk. The wastewater treatment site however is not shown to be within the tidal flood risk area according to the study.

A model was used to look at the effect of wave action on flooding (referred to as an amazon model). The model was run for a series of conditions to determine the possibility of wave overtopping the peninsula for a 1 in 200 year event and a 1 in 1000 year event, in order to test the impact of wave action on the flood zones. The results indicate that Pigeon House Road is at risk of overtopping for both the 0.5% AEP (1 in 200 year event) and 0.1% AEP (1 in 1000 year event). Approximately 20 metre strip of tunnel shaft site is at risk from wave overtopping in the 0.5% AEP and this is increased to approximately a 37 metre strip for a 0.1% AEP. It should however be noted that for this flooding to occur the higher bund around the site is assumed to be removed. The ground levels at the tunnel shaft range from 4.3 to 4.8 metres Ordnance Datum. The ground levels are all above the 0.1% AEP tide level. However the tunnel inlet shaft site compound adjacent to the coastline is likely to be affected by wave action.

The wastewater treatment plant is located in Flood Zone C – low risk, but it is categorised as “heavily vulnerable development in the vulnerability classifications in the Flood Risk Management Guidelines”.

The tunnel inlet shaft is located in Flood Zone B – moderate risk, and is categorised as water potable development and is therefore deemed to be appropriate to this location.

Pigeon House Road is located in Flood Risk A – high risk but is categorised as “less vulnerable development” or maybe even water compatible development. The existing storm tanks are located in flood zone B – moderate risk which are categorised as highly vulnerable development including essential infrastructure. The Board will note that the existing storm water tanks are not proposed to be modified under the current application. The report therefore considers that the wastewater treatment plant and the tunnel inlet shaft are appropriate for the terms of location for flood risk. The existing sites are not greenfield sites and hence the proposed development will not produce any significant amount of additional surface water run-off.

While the tunnel inlet shaft is located in a moderate flood risk zone, the scale of the proposed works is very small and therefore will not produce any significant additional surface water run-off. The sites are located on the Poolbeg peninsula and there is natural drainage into Dublin Bay. In this regard the proposed development will have an imperceptible impact on the existing flood regime.

In terms of vulnerability, the tunnel inlet shaft may be most at risk from flooding due to wave action overtopping the land area. The inlet shaft will incorporate higher free board allowances of 1 metre for buildings and tanks at 500 metres for any roads or footpaths. The finished floor level or top of the wall level for the wastewater treatment works will be 5 metres OD which is above the recommended design flood level of 4.56 metres OD. The final effluent conduits will be increased to 7.5 metres OD not so much for flood protection but to provide sufficient hydraulic head for the outfall to operate by gravity. The tunnel inlet shaft will have a top wall height of approximately 8

metres. With these mitigation measures in place, it is not considered that the proposed development is vulnerable to coastal flooding.

Based on the detailed assessment carried out as part of the proposed development, I can only conclude having regard to historical information relating to the site and its immediate environs and the proposed mitigation measures to be put in place, that the proposed development will not give rise to any significant concerns in relation to flooding inundation, nor will it exacerbate the potential for flooding in the immediate vicinity of the site. The fact that no such concerns were raised by other parties suggests that there are no major concerns that the proposed development will give rise to any flooding problems or be at the risk of being flooded even under severe weather conditions.

8.17 Legal Arguments: Screening Procedures for Appropriate Assessment

The Sandymount Merrion Residents Association put forward legal arguments that the applicant has no jurisdiction to conduct a screening exercise for the purposes of Article 6(3) of the Habitats Directive to determine whether or not a Natura Impact Statement is required to be submitted with the application. It is contended that pursuant to Section 177 S (2)(h) of the 2000 Act as substituted by Article 9 of SI 473 of 2011, the Board is the “competent authority” to carry out screening exercise that must be carried out under Part X of Part XAB or in respect of proposed local authority development on the foreshore. Thus in accordance with the provisions of Section 177 U(2) the Board shall carry out screening for Appropriate Assessment before consent for the project of this nature is permitted. On these grounds it is argued that the decision of the applicant to screen the NIS has no legal effect. Thus the Sandymount and Merrion Residents Association submit that any Natura Impact Statement must be published under proper procedures in advance of reconvening the oral hearing.

The applicants response to this legal query was set out by in Mr. Dodds’ (Counsel for Dublin City Council) closing submission at the oral hearing. He stated that the current application before Board is covered under the legal provisions as set out in Section 226 which relates to development partly or wholly under foreshore, Section 175 which relates to local authority development for which an EIA is required and Section 177 AE which relates to development which could affect the integrity of a European Site and for which Appropriate Assessment is required.

More importantly for the purposes of the legal argument set out on behalf of the Sandymount and Merrion Residents Association, the applicants make reference to the Planning and Development (Amendment) (No. 3) Regulations of 2011 and in particular Chapter 4 of the said Regulations which relates to local authority development. Article 25 of the Regulations which specifically relates to the screening for Appropriate Assessment state:-

(1) In order to ascertain whether an Appropriate Assessment is required in respect of a development which it proposes to carry a local authority shall

carry out a screening of the proposed development (my emphasis) to assess in view of best scientific knowledge, if the development, individually or in combination with other plans or projects would be likely to have a significant effect on a European Site.

(2) *On the basis of a screening under sub-Article (1) it cannot be excluded, on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, would have a significant effect on a European Site, the **local authority shall determine** (my emphasis) that an Appropriate Assessment of the proposed development is required and shall prepare an NIS in respect of the proposed development and shall submit the proposed development to the Board for approval under Section 177 A(e) of the Act.*

It appears therefore that the legislation is unambiguous and unequivocal that in the case of local authority development, it is a requirement for the local authority to carry out the screening for the proposed development to assess, in view of best scientific knowledge, if the development would be likely to have a significant effect on a European Site. Therefore in the case of local authority development, Article 250 of SI No. 476 of 2011 clearly stipulates that it is the local authority and not An Bord Pleanála that is the competent authority to carry out the screening assessment.

Mr. Dodds also pointed out during his closing submission that if the Board were the competent authority for all screening associated with local authority development, the Board would be required to screen all developments, even those developments carried out by a local authority under Part 11 of the Act which, in normal circumstances the Board would not have any involvement or jurisdiction.

9.0 CONCLUSIONS

Arising from my assessment above, I recommend that the Board grant planning permission for the proposed development. I base my recommendation on the following: -

- The proposed development is fully in accordance with policies and objectives set out in the Greater Dublin Strategic Drainage Study (2005). The Regional Planning Guidelines for the Greater Dublin Area, 2010 – 2022 and the Dublin City Development Plan 2011 – 2017 all of which seek to expand the Regional Wastewater Treatment Works at Ringsend to its ultimate capacity while providing for a regional wastewater treatment plant at North County Dublin.
- The proposed development based on the hydraulic modelling scenario set out in the EIS will improve the water quality of designated waters of Dublin Bay which are required under the provisions of the Water Framework Directive and will comply with the parameters set out for Coastal Transitional and Sensitive designated waters as well as bathing waters which are set out in the

European Communities Environmental Objectives (Surface Water) Regulations 2009, the Bathing Water Regulations (SI 79 of 2008) and the Urban Wastewater Treatment Regulations (SI 254 of 2001) (as amended).

- The proposed development, based on best scientific knowledge will improve water quality in the said designated waters without impacting on the integrity of designated European Sites most notably the North Dublin Bay SPA Site Code (004006), The South Dublin and River Tolka Estuary SPA Site Code (004024) and the North Dublin Bay SAC Site Code (000206). I consider it reasonable to conclude based on the information available and based on best scientific knowledge that the proposed development individually or in combination with other plans and projects would not adversely impact on the integrity of the above European Sites in view of the conservation objectives associated with these sites.

- I also consider that the totality of the information submitted with the application and the further information illicited at the oral hearing meets with the statutory EIA requirements and provides an adequate basis for an objective and informed assessment of the proposal.

- Finally I consider that the proposed development will not adversely impact to any material extent on the amenity of adjoining areas, particularly residential areas in Ringsend, Sandymount, Merrion and Irishtown in terms of visual impact, traffic, noise and odour.

10. RECOMMENDATIONS

I therefore recommend that the application be approved for the proposed development in accordance with the plans and particulars lodged based on the reasons and consideration set out below.

11. DECISION

Grant approval for the proposed development in accordance with the plans and particulars submitted based on the reasons and considerations set out below.

REASONS AND CONSIDERATIONS

Having regard to the policies and provisions and objectives set out in the Greater Dublin Strategic Drainage Study, the Regional Planning Guidelines for the Greater Dublin Area and to Dublin City Development Plan all of which have an objective to expand the existing wastewater treatment facility at Ringsend to its ultimate capacity, the presence of an existing wastewater treatment plant on site and the site's location on the Poolbeg Peninsula a considerable distance away from residential development, the resultant improvement in water quality for bathing waters, coastal waters, transition waters and designated sensitive waters in Dublin Bay in accordance with the requirements set out under the Water Framework Directive (2000/60/EC), best scientific knowledge which indicates that the proposed development will not adversely impact on the integrity of designated Natura 2000 Sites in Dublin Bay in light of the conservation objectives for the site, it is considered that subject to conditions set out below, that the proposed development would not be unduly injurious to the amenity of the area or property in the vicinity in terms of traffic, noise, odour and water quality and would therefore be in accordance with the proper planning and sustainable development of the area.

CONDITIONS

General

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application and the information contained in the Environmental Impact Statement including all mitigation measures contained therein, as amended by the further plans and particulars submitted at the proceedings of the oral hearing, 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, these matters shall be the subject of written agreement and shall be implemented in accordance with the agreed particulars.

Reason: In the interest of clarity.

2. The proposed development shall be constructed to a standard capable of complying with the following treated maximum effluent values,

Biochemical Oxygen Demand – 25mg/l

Total Suspended Solids – 35 mg/l

Reason: To comply with the requirements of the requirement so of the Urban Wastewater Treatment Regulations SI 254 of 2001.

Construction and Environmental Management Plans

3. A construction management plan including all construction method statements shall be prepared by Dublin City Council and implemented by the contractor. Dublin City Council shall retain responsibility for the overseeing, updating and enforcing the construction environmental management plan. The construction management plan shall include but shall not be restricted to the following:
- (i) Set out all preventative and management measures to be applied throughout the construction phase for that all potential impacts or minimised mitigated or avoided.
 - (ii) Detail all construction method statements to be employed on site.
 - (iii) Detail all measures to be employed in relation to spill contingencies, spoil disposal, and management of contaminated soil, the selection of slurry additives, drilling fluids etc.
 - (iv) Adhere to measures set out in the Construction Industry Research and Information Association (CIRIA) on the control and management of water pollution from construction sites shall be adhered to.
 - (v) All fuels or chemicals kept on the construction site shall be stored in bunded containers. All refuelling and maintenance of vehicles and equipment shall be carried out in designated containment areas away from sensitive environments.
 - (vi) Any waste or hazardous waste residuals or potentially contaminated sludge from spill clean-up will be stored in appropriate receptacles or containers, or in bunded storage areas prior to its removal by a local authority or EPA licenced contractor.
 - (vii) Any discharges arising from the construction phase shall incorporate silt removal and hydrocarbon removal using a hydrocarbon interceptor.
 - (viii) The contractor shall be required to undertake regular monitoring of the water quality being discharged off the site during the construction phase. The monitoring should take place on a weekly basis and should include all the relevant parameters for the priority hazardous substances set out in Table 12 of Schedule 6 of SI 272 of 2009.
 - (ix) Foul sewage will be tankered off site and shall be disposed of by discharging to a licenced sewer network.
 - (vii) All marine vessel waste generated during the pipeline survey and any maintenance vessels including marine rigs etc will accord with relevant guidelines including those guidelines from annex V of the International Convention from the Prevention of Pollution from Ships as modified. All hazardous waste stored on ships will be contained in sealed labelled

containers and stored in lockable container cabinets. A record of all of all types and quantities of waste arising on each vessel shall be kept.

- (viii) The Guidelines entitled '*Requirements for the Protection of Fisheries Habitats during Construction and Development Works at River Sites*' prepared by the Eastern Regional Fisheries Board shall be adhered to in full.
 - (ix) All surface water discharge points shall be fitted with oil separators which will comply with current European Standard EN 858.
4. An Environmental Management Plan (EMP) shall be prepared for the proposed development it shall set out the following:
- (i) Responsibilities and procedures for implementing the required mitigation measures as set out in the EIS and in the conditions attached to this decision
 - (ii) Detail all systems and procedures to review the implementation of all measures to be employed in the mitigation
 - (iii) Establish management proposals and monitoring protocols for areas of ecology, archaeology, water quality management (both ground and surface), dust management, noise management, traffic management, sediment control, spoil disposal, general pollution control, community liaison, hazardous substance management, environmental training and supervision for personnel.
 - (iv) Management of all landscaping within the sites, and where appropriate in the vicinity of the site.
 - (v) Provide details of site managers, contact numbers (including out of hours) and public information signs (including warning signs) at the entrance and where appropriate at the boundaries of the site.
 - (vi) A pest control plan.
 - (vii) Upon the commencement of construction, the EMP will be reviewed according to a regular timeframe and will be updated if necessary.
 - (viii) Environmental auditing will be undertaken to ensure compliance with the EMP.

Dust and Odour Mitigation

5. The odour emanating from the site shall not exceed $10 O_U E/mg^2$ at the 99.4 percentile for hourly averages at the site boundary.

Reason: In the interest of surrounding amenity.

6. Dust mitigation measures shall include the construction of five meter high screens and barriers to prevent the escape of fugitive dust from the construction compound. The appropriate cleaning of the wheels and undersides of vehicles leaving the construction compound. All loads of dry fine materials shall be either sprayed with water or where appropriate covered prior to exiting the construction compound.

Reason: To control dust emissions arising from the development and in the interest of the amenity of the area.

7. All trucks and HGV's exiting the wastewater treatment site and the tunnel inlet shaft site carrying spoil shall be covered with suitable tarpaulin or other such durable cover.

Reason: To control dust emissions arising from the development and in the interest of the amenity of the area.

8. Dust levels at the site boundary shall not exceed $350 \text{ mg/m}^2/\text{day}$ averaged over a continuous period of 30 days. A monthly survey and monitoring programme of dust and particulate emissions shall be undertaken to provide for compliance with these limits.

Reason: To control dust emissions arising from the development and in the interest of the amenity of the area.

9. Water browsers / sprayers shall be deployed during periods of dry weather in order to reduce dust generation within the site.

Reason: To control dust emissions arising from the development and in the interest of the amenity of the area.

10. Wheel wash facilities shall be placed on all access/exiting points to and from the construction compounds. Roads in the immediate vicinity on the site will be inspected on a daily basis, and where necessary shall be cleaned.

Reason: In the interest of visual amenity.

Noise and Vibration Control

8. Noise mitigation measure will be employed so as to ensure that the following noise levels are adhered to during the construction phase:

(a) Construction Noise Level Criteria at any Façade of a Normal Residence:

Day	Period & Limit (dB)	Notes
Monday to Friday	70 LAeq 1Hr 700-1900 Hours 65 LAeq 1Hr 1900-2200 Hours 45 LAeq 15min 2200-0700 Hours*	*Non tonal, non impulsive
Saturdays	70 LAeq 1Hr 0800-1630 Hours 55 LAeq 1Hr 1630-2200 Hours 45 LAeq 15min 2200-0800 Hours*	*Non tonal, non impulsive
Sundays, Bank and Public Holidays	60 LAeq 1Hr 0800-1630 Hours 50 LAeq 1Hr 1630-2200 Hours 45 LAeq 15min 2200-0800 Hours*	*Non tonal, non impulsive

Reason: To protect residential amenity.

9. Construction of the tunnel inlet shaft shall only take place during normal working hours (0700 hrs to 1900 hours) until such time as the tunnel boring machine has reached a depth of 10 meters below ground level.

Reason: To protect residential amenity

10. Where Blasting is to take place during the construction works for both the inlet tunnel shaft or in the case of the WWTP extension ground vibrations shall not exceed 6 millimetres per second peak particle velocity (when measured in any one of the three mutually orthogonal plains (for which any blast when measured at the nearest vibration sensitive location). If blasting occurs more than once a week, ground vibration shall not exceed 8 millimetres per second peak particle velocity (when measured in any one of three mutually orthogonal plains) for any blast when measured at the nearest vibration sensitive location.

The air over-pressure from any blast shall not exceed the value of 125 B(lin) maximum peak with a 95% confidence no individual air over pressure value shall exceed the limit value by more than 5 dB (Lin)

A monitoring programme, which shall include reviews to be undertaken at monthly intervals, shall be developed to assess the impact of the quarry blasts.

Reason: In the interest of public safety and residential amenity.

11. Underwater noise levels shall, as stated in the EIS, be monitored in accordance with a monitoring plan to be agreed with the National Parks and Wildlife Service during the construction period.

Reason: To ensure the protection of marine mammals and other marine fauna

12. During the construction of the diffuser shaft, a suitably qualified marine ecologist shall be present on the marine construction rig so as to ensure that no marine mammals or cetaceans are within the 100 m exclusion zone of the rig during the commencement of drilling operations. Where such marine fauna are present within the exclusion zone drilling operation will be suspended until such time as the fauna leave the exclusion zone.

Reason: To ensure the protection of marine mammals and other marine fauna

Visual and Landscaping

13. During the construction of the tunnel shaft a 5 meter high hoarding shall be constructed around the perimeter of the site.

Reason: To protect the visual and residential amenities of the area.

14. Appropriate reinstatement of all landscaping, earthworks, boundaries and access arrangements shall take place post construction phase. Works shall include the dismantling of all temporary construction works and removal of all equipment and other temporary infrastructure on site.

Reason: In the interest of visual amenity

Protection of European Sites

15. A comprehensive method statement relating to the installation of the underground electricity supply cables and road improvement works, shall be prepared prior to the commencement of works. Works on the compensatory grassland shall not be undertaken during the winter period (September 1st to April 30th inclusive)

Reason: In the interests of orderly development and to ensure that the potential impact on the Brent Geese using the grassland is minimised.

16. All works to be undertaken within and adjacent to Natura 2000 sites within Dublin Bay will be undertaken in consultation with a suitably qualified ecologist appointed in consultation with the National Parks and Wildlife Service. Details shall be agreed in advance of any works commencing on site.

Reason: To ensure that the integrity of the designated Natura 2000 sites located within Dublin Bay and in particular conservation objectives of the designated sites are not adversely affected by the works undertaken.

17. Detailed monitoring of bird species and bird numbers together with their distribution within the Dublin Bay Area should take place over a 6 year period from the date on which the diffuser pipe becomes operational. Details of the exact nature and composition of the surveys should be agreed in consultation with the National Parks and Wildlife Service. If after such a period, if any changes in bird populations are detectable, and these changes in population can in anyway be attributable to the works undertaken in relation to the relocation of the outfall pipe, compensatory measures shall be drawn up and implemented in consultation National Parks and Wildlife Service.

Reason: To ascertain any changes in bird populations in the bay and whether or not any such changes can be attributable the works undertaken and also to ensure that the integrity of the designated Natura 2000 sites located in Dublin Bay and in particular conservation objectives of the designated sites are not adversely affected by the works undertaken in the longer term.

18. A detailed method statement shall be prepared and implemented for the stripping of soil and subsoil of the compensatory grassland during the laying of the electric cables. The grassland has be re-instated in accordance with the provisions of the method statement to its original condition after the laying of the electric cables.

Reason: To ensure the satisfactory reinstatement of the compensatory grassland.

19. There will be no refuelling within or within 20 meters of the boundary of the South Dublin Bay c SAC or within the South Dublin Bay and River Tolka Estuary SPA. All construction materials (fencing, gravels, hard standing materials, machinery etc) shall not be stored within the designated boundary of the South Dublin Bay c SAC or within the South Dublin Bay and River Tolka Estuary SPA.

Reason: To ensure that the proposed development will not impact on the integrity of the designated sites.

Traffic

20. A clearly demarcated pedestrian crossing on Pigeon House Road to the east of the wastewater treatment plant together with the construction of a railing along the footpath on the northern side of the Pigeon House Road and a slip form kerb barrier shall be provided along the southern side of Pigeon House Road shall be constructed prior to the commencement of development. Access arrangements for pedestrians should be monitored on a weekly basis throughout the construction period. Where it is decided that that pedestrian access arrangements to the South Bull Wall and surrounding amenity area is adversely affected, during the construction period, appropriate measures shall be incorporated to minimise any impact on pedestrian access arrangements.

Reason: In the interests of pedestrian safety.

21. Construction related HGV trips will comply to Dublin City Councils HGV Management Strategy and construction related HGV trips shall be prohibited from operating to and from the site during week day traffic peak periods of 7 am to 10 am and 4 pm to 7 pm.

Reason: To ease traffic congestion in the surrounding area and in the interests of residential amenity.

22. A detailed traffic management plan shall be drafted by the Project Supervisor Design Office in full consultation with Dublin City Council, An Garda Síochána, the Fire Service and the Ambulance Service.

Reason: In the interest of Road safety

23. Where abnormal load movements arise, an abnormal load permit will be made to Dublin City Council and where possible any abnormal load movements shall be restricted to evening or night-time.

Reason: To avoid congestion on the surrounding road network.

24. The existing car park to the east of Pigeon House Road shall be maintained solely for public use and shall not accommodate any staff parking associated with the construction phase. All staff parking shall take place within the confines of the construction sites.

Reason: In the interests of preserving recreational amenity.

Archaeology

25. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within the construction sites, and the area of land affected by the laying of electric cables and the proposed new access slip road on land and the protection of any marine archaeological deposits that may exist in the vicinity of the proposed diffuser shaft. In this regard the developer shall –

- (a) Notify the Department of the Environment Community and Local Government in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development.
- (b) Employ a suitably qualified archaeologist who shall monitor all site investigations and other excavation works and,
- (c) Provide arrangements for the recording and for the removal of any archaeological material which the Department of the Environment Community and Local Government considers appropriate to remove.

In default of an agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: 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.

26. An Archaeological dive inspection shall take place prior to the commencement of works in order to clarify the nature of the anomalies identified during the off-shore investigations on the sea bed. If necessary the diffuser shaft will be relocated to a point as close as possible to the proposed location without impinging or impacting upon any feature of archaeological interest. All such works will be carried out in consultation and under the supervision of a suitably qualified marine archaeologist.

Reason: In order to conserve the archaeological heritage of the Bay and to secure the preservation and protection of any remains that may exist within the Bay.

Navigation Requirements

27. The applicant shall inform Dublin Port Authority of the precise location including the geographical co-ordinates of the tunnel and the outfall diffuser shaft. The location of the diffuser shaft as constructed will be clearly and accurately marked on a revised Dublin Admiralty Chart.

Reason: To ensure that the diffuser shaft and outfall tunnel can be accurately located and identified.

Waste Management and Soil Remediation

28. All spoil and waste will be removed by authorised waste contractors and will be treated / disposed of at authorised and fully licenced waste facilities.

Reason: In the interest of orderly development.

29. Prior to the commencement of the construction work and thereafter throughout the construction phase, the applicant shall be required to conduct a comprehensive environmental monitoring programme in respect of the soil to be excavated. This monitoring programme shall require that soil samples will be analysed in accordance with the requirements of the waste acceptance criteria set under EU Council Decision 2003/33 EC, and will be disposed of accordingly.

Reason: To ensure that any contaminated or hazardous soil is treated or disposed of in accordance with best practice.

30. The appointed contractor shall be required to produce a waste management plan. This plan shall be prepared in accordance with the “Best Practice Guidelines on the Preparation of Waste Management Plans for the Construction and Demolition Projects”, published by the Department of the Environment, Heritage and Local Government in July 2006. A project waste

manager will be appointed to oversee the implementation and adherence to the plan.

Reason: In the interest of sustainable waste management.

31. All groundwater pumped during the excavation of the Wastewater treatment extension and the Tunnel outlet shaft shall be monitored to quality and will be treated by passing through a hydrocarbon interceptor prior to any discharge into the River Liffey. Measures shall also be undertaken to ensure that the total suspended solids content of the groundwater discharging into the River Liffey does not exceed 100 mg/l.

Reason: To protect and maintain the water quality in the River Liffey.

**Paul Caprani,
Senior Planning Inspector.**

October 22rd , 2012.

APPENDIX I – ASSESSMENT AND EVALUATION OF EIS SUBMITTED WITH THE APPLICATION

(a) Compliance with the requirements of Article 94 and Article 111 of the Planning and Development Regulations, 2001.

I am satisfied that the proposed development complies with the provisions of Article 94 and 111 of the Planning and Development Regulations, 2001. The EIS:

- Incorporates a summary of the proposal in non-technical language.
- Describes in an adequate manner the existing environment, including details of Dublin Bay and Harbour and the tidal characteristics bathymetry of same.
- The EIS sets out a description of the physical characteristics of the project and its land use requirements during both the operation and construction phases. However I would qualify this statement having regard to the fact that, because the proposal relates to a ‘Design Build and Operate Scheme’, the EIS states that the detailed design of the proposal has yet to be finalised. Three viable secondary treatment options are considered (conventional aeration, deep shaft aeration or additional SRB’s). The EIS states that the detailed design and procurement will provide for development of the preliminary design in a manner such that there is no material change in terms of significant adverse effect on the environment. The information contained in the EIS has been used as a basis to determining the environmental impact in accordance with the legislation. Furthermore a worst case scenario was evaluated in terms of the environmental impact (for example in the case of noise and vibration, the EIS evaluated the construction of deep shaft aeration tanks for the extension. In the case of visual impact, the EIS evaluated the provision of c 20m high SBR’s). Provided that the detailed design parameters presented in the drawings and EIS are adhered to, in a case where planning permission is granted, I am satisfied that the EIA has been carried out in accordance with the above provisions and this will be evaluated in more detail under separate sections below.
- The EIS describes the current processes which are carried out on site and details the current and projected organic and hydraulic loading of the treatment plant.
- The EIS sets out in detail the proposed development including the construction aspects of the works envisaged and evaluates the potential impact of the proposal on the environment during both the construction and operational phase,
- The EIS considers and evaluates alternatives including the evaluation of treatment options and different locations for the outfall. Alternatives were evaluated in terms of cost, residual asset value, maintenance sludge treatment, chemical consumption and greenhouse gases. Secondary treatment with a long sea outfall is considered to be preferred

solution from an operational, technical, environmental and financial view point.

- The EIS sets out in adequate detail the set out the legislative context that guides the proposed development including the parameters and limits relating to coastal and transitional waters as specified under the
 - Environmental Objectives (Surface Water) Regulations SI 272 2009,
 - The Bathing Water Regulations (SI 79 of 2008)
 - The Urban Wastewater Treatment Regulations (SI 254 of 2001)
- Planning policy as it relates to the proposed development is also assessed under the NDP, NSS, RPG's for the GDA, and The Dublin City Development Plan .
- The layout of the proposal, including the proposed long sea effluent outfall extension is set out in Appendix B of the EIS.
- The EIS provides the data necessary to identify and assess the main effects the project is likely to have on the environment. This includes marine dispersion modelling within the bay for the main contaminants (DIN, MBR, BOD, E. coli).
- The EIS contains details by both type and quantity of the anticipated emissions resulting from the operation of the plant and incorporates a hydraulic model which assesses and evaluates the likely dispersion plume to be emitted from the diffuser outfall.
- The EIS contains a description of the aspects of the environment to be specifically affected by the proposed development most important of which is the ecological and aquatic environment of Dublin Bay. These issues are set out in more detail in my planning assessment and further on in this Appendix.
- The inter relationship between environmental factors are set out in chapter 18 of the EIS.
- The EIS adequately evaluates the residual impacts arising from the proposed development and other developments in the vicinity.

(b) *The identification of the likely significant direct and indirect effects of the project on the environment.*

In this section I propose solely to identify the main likely effects under the range of headings as set out in the EIS.

Human Beings

- Impacts on Local Residents – Ringsend, Irishtown and Sandymount.
- Impacts on Local Amenity- Dublin bay used for water based recreation sailing fishing diving and swimming.
- Impact on employment

Traffic

- The increase of traffic on the local road network particularly during construction and to a lesser during operation of the upgraded wastewater treatment works.

Noise and Vibration

- Potential impacts from airborne noise (both construction and operation)
- Underwater noise (both construction and operation)
- Vibration particularly during the construction of the tunnel shaft

Ecology (Marine and Terrestrial)

- Potential impact marine benthos from changes in the nutrient level in the receiving waters
- Potential impact on birds through potential changes in marine ecology for feeding patterns etc and from disturbance
- Potential impact on fish mainly through disturbance
- Potential impact on terrestrial flora and fauna through construction works
- Potential impact on adjacent Natura 2000 sites

Impacts on Water Quality

- Impacts of the physico-chemical and biological parameters of the receiving water in the vicinity of the new diffuser.
- The consequent impacts on water quality on the inner part of Dublin Bay as a result of relocating the outfall from the mouth of the River Liffey.
- Impact on flood risk.
- Impact on aquatic life.

Cultural Heritage

- Impact on archaeology.
- Impacts on monuments and places of architectural and historical importance.
- Potential impact on marine archaeology and shipwrecks.

Air Quality

- Impacts in terms of odour
- Impacts in terms of other air pollution concentrations (PM₁₀ NO_x etc) primarily as a result of traffic generation and tunneling.

Landscape and Visual

- Visual impact from the physical construction works to take place on site.
- Loss of vegetation arising from development.

Soils, Geology and Hydrogeology

- Potential impact on the soils, bedrock and water table resulting from the construction of the deep aeration shafts and the inlet tunnel shafts to be constructed on site (under a worst case scenario).
- Potential impact on two geological heritage areas in Dublin Bay.
- Accidental spillages of substances stored on site leaching to the groundwater.

- Disposal of waste and spoil arising from the excavated material, some of which may be contaminated land.

Material Assets

- Potential impact on manmade or natural assets in and around Dublin Bay including
- Impact on utilities
- Recreational facilities and amenities
- Impact on mariculture.
- Impact on geological resource and heritage areas.

(c) *Description of likely effects identified*

Socio Economic

- Positive impact on employment during the peak construction phase up to 100 jobs created.
- Construction could create short term nuisance – noise, traffic etc.
- The wastewater treatment will facilitate the economic expansion of Dublin which will create greater economic prospects.
- Potential visual impacts as a result of machinery from the construction shaft

Water Environment

- The proposed outfall is located outside the transitional waters and coastal waters as defined in the Water Framework Directive. As such the standards set out in the water Framework Directive do not cover the receiving waters in question. Nevertheless the change in water quality is assessed in the context of SI 272 of 2009. Reference is also made to the various parameters and objectives set out in the
 - Bathing Directive 76/160/EEC – (SI 155 of 1992) this Directive will be superseded by Directive 2006/7/EC which will repeal the existing Directive on December 31st 2014. New Bathing Water Quality Regulations were also brought into in 2008 (SI 79 of 2008)
 - UWWT Regulations SI 254 of 2001
 - The Marine Strategy Framework Regulations SI 249 of 2011.
 - The Dublin Bay Water Quality Management Plan
- A 3-D Hydrodynamic Model was undertaken on the existing outfall and overflow tank. Details of the modelling methodology, parameters and concentrations used and geographical extent of the modelling area is set out in section 8.2 of the EIS. Section 8.3 of the EIS describes the

existing environment in terms of hydrography, tidal characteristics, river catchment areas and water quality characteristics in the rivers, transitional waters and coastal waters of Dublin Bay.

- The existing situation is modelled for DIN, MRP, BOD and E-coli for mid flow neap, low water neap and for maximum concentrations. The EIS then sets out the modelling results for the proposed discharge (see further section below).

Traffic

- Potential increases in traffic particularly during the construction phase as a result of the removal of spoil for the tunnel shaft. HGV traffic will be the main type of trip generation. This will amount to approximately 135 HGV trips per day
- Transportation of construction materials to the site for both the extension to the WWTP and the construction shaft this will amount to approximately 66 trips per day.
- Site staff trips approximately 150 trips per day during the construction period only.

Noise

- *Construction noise.* This is the primary consideration in the EIS as it is considered that noise levels will not change considerably as a result of the operational changes proposed. Construction noise can be attributed to construction machinery, particularly used in the tunnel construction, and construction traffic.
- Noise generation associated with the tunnel shaft at and near the surface will be a main concern during the early phase work at the surface which will include some pile driving.
- Underwater noise can interfere with marine foraging and communication and in severe cases cause deafness to marine mammals. Tunnelling noise will travel up through the rock and sediment and into the waters of Dublin Bay.
- There are no residential areas close enough to the proposed development to warrant any concern regarding vibration. The primary concern with regard to vibration is with the ESB turbines at the power station which are very sensitive to vibration.

- *Operational Noise.* The cumulative impact from operational noise will only be derived from the additional secondary treatment operations on site.

Terrestrial Ecology

- Potential impacts of the conservation interests of SPA's and SACs located in Dublin Bay and designated sites in North Dublin particularly migratory birds.
- Potential impact on the inter-tidal habitats around Bull Island.
- Potential impact on wintering water birds within the bay.
- Impact on breeding birds within the bay.

Marine Ecology

- An Improvement in sea water quality in parts of inner Dublin Bay as a result of the relocation of the outfall.
- The placement of supports for the construction of the diffuser will result in some sediment plume. Only the areas in the immediate vicinity of the diffuser will be affected. During the boring of the diffuser shaft some sediment will be disturbed as the drill encounters the sea bed.
- Improvements in sediment quality and benthic diversity in the inner Dublin Bay
- The permanent removal of approximately 25 m² and benthic habitat at the outfall.
- The impairment of water quality at the mixing zone in the immediate vicinity of the diffuser

Cultural Heritage

- Impact on previously unrecorded features that may be present on site.
- Changes to the landscaping setting of monuments/protected structures in the vicinity as a result of works carried out including the Pigeon House fort, Pigeon House Hotel, Pigeon House Power Station.
- Impacts on potential shipwreck sites close to the diffuser.

Air Quality

- The EIS acknowledges that odour emissions were a significant issue before 2005. Significant measures were undertaken to improve odour emissions. Total odour emissions have been reduced by 75%.
- Impacts on odour due to the increased loading of the plant. Hydrogen Sulphide, Mercaptans, VOC's.

- Impacts on air quality particularly dust during the construction phase from both boring the tunnel shaft and from traffic to and from the site.

Landscape

- Potential impact on visual receptors from the extended wastewater treatment plant due to the installation of new infrastructure/equipment including the provision of large sequencing batch reactors up to 18 meters high.
- The construction machinery active compound area during the construction on the long sea outfall (estimated time frame of 3 years).

Soils, Geology and Hydrogeology

- The proposed works are anticipated to give rise to 576,300 m³ of spoil from the tunnelling works, 14,000 m³ from the deep shaft aerators. This will amount to 847,000 tonnes of material which will be required to be transported and disposed of, off site.

Material Assets

- The Tunnel will not have any impact on the sailing or yachting within Dublin bay. The closest buoy is over 2 km away from the diffuser.
- The diffuser is not located near any navigation channel
- The proposal may require connection to the water supply, telecommunication network and a sewerage connection.

(d) Assessment of the likely significant effects identified, having specific regard to mitigation measures to be employed.

Socio Economic

The EIS concludes that the operation phase will have no impact on the local area or economy. There are no residential dwellings within 900m of the site. The works undertaken will have a more significant impact in the wider area by improving public utilities on the area and generating extra treatment capacity. There are no specific mitigation measures required in terms of socio-economic impact. Specific mitigation measures in terms of noise, odour etc are set out in separate chapters. Dublin Port Authority will be notified of the exact location of the tunnel and the diffuser.

Water Environment

During the operational phase it is stated that there will be an overall improvement in the water quality in the inner part of Dublin Bay due to the

relocation of the discharge point out to sea. The modelling exercise indicated that the concentration of the discharge outside the mixing zone will comply with

- The requirements of the existing discharge licence
- Will meet the good status criteria and the environmental quality objectives for coastal water nutrient levels in SI 272 of 2009.
- The proposal will comply with the UWWT Regulations by ensuring the WwTP does not discharge in to nutrient sensitive waters.
- The new discharge point will reduce the current discharge plume on the inner bay which will positively affect the bathing status of waters
- Finally the proposal will support the priority proposals in the Dublin Bay Water Quality Management Plan.

Traffic

Increased HGV trip generation during the construction phase will result with the removal of spoil. It is estimated that just under 600,000 m³ of spoil will be removed for the construction of the long sea outfall. This will equate to approximately 135 trips per day. An additional 48 trips per day will be required to deliver tunnel rings to the site and other construction material to the site. In total approximately 200 HGV trip and 150 staff trips will be generated on a daily basis. HGV traffic will not be permitted during am and pm peak periods. The ratio of flow to capacity indicates that all critical junctions in the vicinity of the site can cater for the anticipated trips arising from the construction works. A sensitivity analysis was carried out incorporating the unlikely scenario that the (i) operation of the waste to energy site on the contiguous lands (ii) the permitted spoil haulage route being operational for only 6 hrs as opposed to 18 hrs per day and (iii) and the acceleration of tunnelling activities from 16.5 meters to 30 meters per day. Even under these scenarios there is residual capacity in the road network to cater for such eventualities. Traffic will be required to enter/exit the site through the East Link and Port Tunnel. During the operational phase of the plant the HGV traffic will increase by about 17% or 2 trips per day. The proposal will not result in an increase in staff numbers.

Marine Ecology

Construction - In terms of marine mammals it is extremely unlikely that any species will remain in close proximity to the zone of the diffuser shaft during construction due to the noise and vibration disturbances. Due to the small area of construction works the impact on fish is unlikely to be measurable.

Operation – Decreases in the projected DIN in the bay are not considered to be of levels which will impact on the structure and functioning of benthic ecosystems. The predicted reduction in MRP or DIN will have little or no impacts on benthic production in the North Bull inter tidal area. Reduction in DIN levels in the Bull Island lagoon will give rise to better sedimentary oxygen levels thereby increasing benthic production. In terms of E-coli, it is acknowledged that this is a food source for micro-plankton. The aerial extent of the bacterial numbers is relatively small and therefore will not have a negative

impact. The trophic status of the southern part of Dublin Bay will not be affected. Water column productivity will decline thereby reducing food resources for birds that feed on this habitat. However the impact is considered to be negligible.

Overall the reduction in organic carbon input as a result of the relocation of the outfall is likely to be reflected in the change of a small number of numerically – dominant species of marine benthos to a greater number of less dominant species.

The increase in nutrients in the outfall diffuser will benefit phytoplankton. No algal blooms occur presently at Ringsend and therefore they will not occur at the outfall site. Noise generated at the diffuser will be negligible to the marine mammals. Impact on commercial fisheries at the diffuser is also considered to be negligible. The nutrient levels will dissipate quickly to have any negative impact on the fish or shellfish.

Noise

The most significant impact in terms of impact in terms of noise and vibration within the WwTP will be the pile driving which will be necessitated to provide solid foundations for the vertical shafts for the secondary treatment plant. Due to the nature and depth of sub-surface material, vibration is not considered to be a significant issue. Given the absence of noise sensitive locations in the vicinity of the site, together with the enclosed nature of the site, it is not considered that noise during the construction of the extension of the WwTP will be significant. The Tunnel shaft excavation the principle noise will be from excavator's cranes and material conveyors. A noise prediction model has been prepared based on a worse- case scenario. The predicted noise levels in the surrounding area are indicated on figure 14.8 of the EIS. No dwellings are expected to experience noise levels in excess of 45 dB(A). In terms of noise levels associated with traffic, the model suggests that the overall impact will be minor and will be below daytime background levels. I do note that the EIS did not present results of the modelling for the extension of the waste water treatment plant. It only presented in isopleth map form, the anticipated noise impact for the tunnel shaft construction and the construction traffic associated development. The cumulative noise impact arising from the entire works was not carried out in the EIS. The issue was explored in the oral hearing and the cumulative impact was assessed in by main report.

In terms of underwater noise the noise generating elements relate to the construction of the tunnel, the diffuser shaft and outfall diffuser. It is extremely unlikely that marine creatures will travel within areas where construction noise will lead to disturbance. Under a worse-case scenario this will cover an area of about 100m from the tunnel shaft and the construction of the diffuser.

In terms of vibration the ESB turbine foundations are monitored and a trip is caused is a peak particle velocity of 11mm/sec is caused. A construction contract will include a limitation of vibration levels set at the building foundation of 6mm/s.

No anticipated impacts arise from noise or vibration either airborne or underwater during the operation phase. Mitigation measures during the construction phase are set out in section 14.6 of the EIS.

Terrestrial Ecology

Construction Impact – The construction of the access road will impact in a minor way on habitats of limited conservation value. All construction activity will be land-based. Wader bird use of the intertidal area in the vicinity of the WWTP is low. However it is considered that in the absence of mitigation measures, the installation of underground electricity cables and the construction of the proposed emergency /occasional access road which could prevent birds feeding in close proximity to the site. The lands which will be affected are classified as species- poor habitat. Noise and vibration during the construction of the long sea outfall pipe is unlikely to impact on the wader bird populations. Mitigation measures for the construction impacts are set out.

Operation Impact – The findings indicate that the reduction in levels of dissolved nutrients will not affect levels of benthic production in Dublin Bay thus it is not considered that the proposal will impact on bird populations of the area.

Soils Geology and Hydrogeology

All bedrock and spoil removed will be re-used where possible in accordance with the principles of the waste hierarchy. Where this is not possible it will be disposed at a licenced waste disposal facility.

The tunnelling of the bedrock will involve deep excavations below the groundwater level. It is therefore not anticipated that groundwater will be affected by the proposal. Precast concrete sections inserted into the tunnel will ensure that infiltration rates will not exceed 1 l/s for the entire tunnel. All oils and fuels will be properly stored and refuelling will take place within specified hard standing and bunded areas.

Archaeological

The potential impact on marine archaeology is considered to be low and archaeological dives will take place to clarify any anomalies on the sea bed.

There will be no direct impact on protected structures during the construction or operational phase. No major impact is anticipated and the proposal will have a negligible effect in terms of archaeology and cultural assets. Provision has been made to allow for the recording of any features which may be identified or observed during construction works.

Air Quality

AERMOD dispersion modelling has been conducted for the wastewater treatment plant. The model inputs included:

- point sources, (odour control unit exhaust stacks)
- Water area surfaces (Storm tanks and SBR's)
- Volume sources in 3 dimensions such as the sludge dryer building.

A projected odour goal of 10 OU is sought above background odour levels. The recommended improvements to be constructed as part of the upgrade include:

- The capture and treatment of the ventilation air from both dryer buildings
- An additional 50% capacity for the main odour control unit
- The capture and treatment of the ventilation air from the screenings building
- The enclosure of the grit storage skips.

Isopleth maps show the reduction in odour generation from the successive abatement measures to be undertaken as part of the improvement works. The model predicts that if all the abatement measures were undertaken in conjunction with those already implemented, the maximum fence line concentration will be 30 OU and 10 OU will be exceeded fewer than 50 hours per year.

In terms of other aspects of air quality, modelling was undertaken for CO, Benzene, NO₂, NO_x and PM₁₀. The model predicts that during the construction operational phase the impact on ambient air quality is negligible.

Landscape / Visual

As there is an existing wastewater treatment works on site and the industrial/port related nature of the receiving environment, it is considered that the visual impact of the proposed development will be negligible. Construction impacts will arise from the use of cranes and machinery on site. Given the nature of the receiving environment the visual impact during the operational phase is deemed to be neutral.

Material Impacts

The proposal is not likely to have a significant impact on any material impacts within the bay.

(e) Conclusions regarding the acceptability or otherwise of the likely residual effects identified.

The critical issues in relation to the EIS have been assessed in greater detail in my assessment, however I am generally satisfied that the EIS adequately evaluates the proposed development in accordance with the criteria set out in Article 3 of the EIA Directive. Again this is based on the evaluation of the indicative development as set out in EIS (as already stated the final detailed design will be undertaken by the contractor appointed as part of the DBO contract. However I am satisfied that a worst case scenario has been evaluated as part of the EIS).

The critical environmental issues have been more comprehensively addressed in my planning assessment above and I do not propose to reiterate these for the purposes of this Appendix. The critical areas in relation to environmental assessment relate to the impact on water quality, aquatic ecology, odour and generally the preservation of the integrity of the SAC's and SPA in the vicinity of Dublin Bay. I am satisfied therefore that the EIS has identified the main residual effects of this proposal on the environment and that any such effects both direct and indirect have been appropriately evaluated under the various headings set out in the EIS.

The Following Appendices have also been incorporated into the EIS:

- Appendix A – EIS Scoping Report and EIS scoping submissions
- Appendix B – Drawing of existing WwTP (NTS).
- Appendix C – Proposed Scheme Drawings (NTS).
- Appendix D – Consideration of Alternatives - Design Review Report
- Appendix E – No Content
- Appendix F – No Content
- Appendix G – Ringsend Long Sea Outfalls Modelling Results
 - Marine Surface Report
- Appendix H – Marine Flora and Fauna
- Appendix I – Terrestrial Flora and Fauna
 - AA for - Long Sea Outfall/ Compensatory Grassland/ ESB underground cables
 - NIS for - Long Sea Outfall/ Compensatory Grassland/ ESB underground cables
- Appendix K – Traffic – No Content
- Appendix L – Air Quality and Odour – No Content
- Appendix M – Noise and Vibration – No Content
- Appendix N – Archaeology and Cultural Heritage Recorded RMP's /Shipwrecks/ RPS's / Industrial Archaeology / Geophysical Data
- Appendix O – Soils, Geology and Hydrogeology
- Appendix P – Material Assets – No Content

APPENDIX II – SUMMARY OF THE PROCEEDINGS OF ORAL HEARING

An oral hearing was held conducted at the offices of An Bord Pleanála on Tuesday, 18th September, 2012 to Thursday, 20th September, 2012. The oral hearing commenced at 11.00 a.m.

Signatures of all person who attended the oral hearing on each of the days are contained on the proceedings of the Oral Hearing which are attached to the file.

After the Inspector's introductory remarks, formal submissions were made at the hearing and these are summarised below.

Submission by Mr. Owen Murphy, T.D.

On behalf of his constituents in Dublin South East, Mr. Murphy stated that there were significant concerns in relation to the proposal currently before the Board as indicated to him residents of the Sandymount and Merrion area. To this end, the Board is requested to scrutinise the proposed development very vigorously together with all its potential impacts so as to ensure that the proposed development is in accordance with the proper planning and sustainable development of the area.

Commencement of Submissions on behalf of Dublin City Council

Brief of Evidence of Mr. Eoghan McManus – Planning Policy Context.

Mr. McManus's submission (B.1.1) outlined the need for the proposed development and noted that Stage 1 of the wastewater treatment plant was designed for a population equivalent of 1.64 p.e. based on load projections for the year 2020. It is known that over the past four years, the wastewater treatment plant capacity catered for about 1.8 million p.e. which is roughly 10% in excess of its design capacity. While the plant has performed very well in meeting its effluent discharge requirements, the plant has struggled on occasion to meet the requirements in relation to the final effluent in terms of suspended solids. In 2009, the plant failed for the first time to meet its 95 percentile standard for BOD. It is noted that there are additional requirements under the Urban wastewater treatment regulations for parameters relating to phosphorous and nitrogen. It is argued therefore that the need for the strategic upgrade is evident.

It is stated that the proposed development is fully in accordance with the Greater Dublin Strategic Drainage Strategy. It is stated that the purpose of the Greater Dublin Strategic Drainage Strategy is two-fold: -

- To provide additional wastewater treatment necessary to meet the identified future shortfall in the region, and
- To divert flows of the Ringsend catchment on a staged basis to a new regional plant so that the Ringsend wastewater treatment works maintains its operational capacity throughout the strategy period.

It is also noted that the Greater Dublin Strategic Drainage Study was the subject of a strategic environmental assessment. The SEA process commenced in 2006 and following extensive public consultations was finalised in 2008. The implementation of the final Greater Dublin Strategic Drainage Strategy is an objective of all county and city development plans of the local authorities.

It is also stated that during the planning of the extension project, extensive non-statutory public consultations were held by Dublin City Council in advance of finalising the application.

The submission goes on to make a number of clarifications in the EIS and update the Board in relation to matters pertaining to the wastewater treatment plant. One of the more important matters highlighted is the fact that the applicants are currently in the process of seeking a dumping at sea license for the spoil from the proposed inlet shaft and tunnel to be constructed as part of the proposed development. Part of the application will involve an assessment the structural suitability of a nearby jetty to accommodate transported spoil onto any ship to be dumped at sea. It is stated that if a license is forthcoming from the EPA to dump the waste at sea, this will have positive implications in terms of traffic generation during the construction phase.

It is also pointed out that some of the immediate upgrades to be undertaken in the wastewater treatment plant may in fact coincide with the envisaged construction period of the proposed extension. There may be some in combination affects, therefore these principally relate to traffic and landscaping matters and these will be addressed in other briefs of evidence at the hearing.

Finally, the submission goes onto address specific concern raised in various observations contained on file. It is not proposed to summarise these issues in this report. The issues raised on file have been dealt with in my assessment.

Brief of Evidence by Mr. Robert J. Gaudes – Project Co-ordinator

This submission involved a powerpoint presentation (see Submission B.1.2). This submission outlined the project brief and the background to the proposed development. It also sets out the various alternatives examined for wastewater treatment on site in the context of the regulatory framework which exists. The presentation explored the alternatives examined for continued discharge into the Liffey Estuary and the discharge beyond the designated coastal area.

The submission went on to outline the programme of work which included immediate upgrades and odour improvement and the proposed extended capacity to treat an additional 400,000 p.e. in terms of secondary treatment. The immediate upgrades include covering the sequencing batch reactors, covering the grit removal tanks and other sundry works.

The submission also sets out the alternatives which are examined in terms of providing the selected outfall sites in Dublin Bay. Four sites were considered in the context of various criteria relating to shipping lanes, designated sites, amenity areas, geological suitability, dilution characteristics etc. The submission also set out the legislative requirements in terms of water quality standards.

The submission went on to set out the modelling that was used to simulate the dispersion characteristics of each of the pollutant parameters (DIN, MRP, BOD and E-coli). Sectional details of the proposed inlet shaft and tunnel were also described in the presentation.

Mr. Gaudes was asked by the Inspector whether or not the possibility of laying the pipe work on the seabed as opposed to tunnelling the pipeline through bedrock was investigated. Mr. Gaudes stated that preliminary investigations were undertaken in this regard, however, it was found that at least a 12-metre trench would be required in order to bury the pipeline on a seabed so as not to interfere with navigational requirements to and from the bay. It was also considered that any dredging requirements for such a large pipeline could interfere with archaeological remains and could adversely impact on the marine life.

Mr. Gaudes then went on to specifically address some of the issues raised in the observations submitted on file.

Brief of Evidence of Richard Nairn in relation to terrestrial ecology

In his evidence (B.1.3) he stated that the methodology comprised of the desk-based assessments, consultations and field surveys of habitats and waterbirds.

The submission goes on to outline the existing environment, first in relation to the construction sites and the immediate vicinity. It is noted Brent Geese were observed feeding on construction areas within the wastewater treatment work site on one occasion during more than 50 monitoring visits between 2007 and 2011.

The submission goes on to outline the ecology of the intertidal areas of Dublin Bay. It is noted that many of the Waders had visited Dublin Bay in recent years have relocated from the north side of the bay to the south side of the bay, primarily due to a morphological changes in the south side of the bay which provides better food sources.

In terms of the summary of impacts and mitigation, it is considered that during the construction phase no significant effects on terrestrial flora or fauna are likely. In this regard no mitigation measures are required. In terms of the intertidal areas it is noted that there is a potential to affect the trophic status of some inner parts of Dublin Bay and therefore indirectly impact on the bird populations. However published studies (which were submitted to the oral hearing by Mr. Nairn) have not demonstrated any correlation between reduced nutrient discharges and trends in water bird populations, in similar estuarine type areas in the UK. It is suggested that population trends for water birds visiting the Bay can depend on a number of variables, of which nutrient levels, in the substrate is just one. It is also noted that some of prey species are tolerant of, but not dependent on, high nutrient levels in the sediment. Some of the micro-algae food sources are not tolerant of high nutrient levels and therefore any reduction in nutrients could be beneficial to these prey species.

Brief of Evidence of Mr. Brendan O Connor – Marine Ecologist

Mr. O'Connor in his submission (B.1.4) outlined the methodology involved in assessing the marine ecology of Dublin Bay and this includes desk based assessments and standard benthic surveys.

The existing environment is described including the marine benthos and marine mammals as well as fisheries in the area.

In terms of impacts it is stated that the only predicted impact on water quality during the construction phase is when the jack-up drill rig is placed on site to construct the diffuser rising pipe. This impact would be low and temporary.

In terms of marine mammals, a marine mammal observer will be on the jack-up during the construction of the riser shaft and will ensure that an exclusion zone of 100 metres is required before any drilling activity takes place. Once the activity has started it is unlikely that mammals or fishes will visit this area.

In terms of water quality it is noted that Dissolved Inorganic Nitrogen is the limiting factor for the marine environment and this pollutant has been modelled. The maximum concentrations of DIN predicted by the model are in the range of 0.6mg/l and background levels are c.0.2mg/l. The impact of this localised increase in DIN is considered insignificant. No impact is predicted on zoo plankton or the Benthic community in general. As the plume will quickly dilute and disperse no impact on fisheries is predicted arising from the operation of the diffuser.

Brief of Evidence of Mr. Deegan in relation to Traffic

Mr. Deegan's submission (B.1.5) outlined the local road network in the vicinity of the site and also outlined the existing and proposed access arrangements to the proposed works to be carried out on site. Traffic counts were undertaken at four junctions over a 24-hour period in January 2011. It is noted that HGVs will not be permitted by Dublin City Council to travel to and from the site during the am and pm weekday peak periods which have been defined from 7am to 10am and 4pm to 7pm. The existing road network was assessed using ARCADY and PICADY software packages. It is considered that the existing road network has ample capacity to cater for the increase of in-traffic envisaged. The project was also tested under various sensitivity scenarios including the operation of the Dublin waste to energy site, reducing the window in which transport is sought from 18 hours a day to 6 hours a day and the acceleration of the tunnelling operation to nearly twice the proposed rate. Under this scenario it is still estimated that the traffic arising from the proposed development will not give rise to congestion problems.

The submission also addresses the potential impact of the proposal on pedestrian amenity along the Pigeon House Road towards the Bull Wall. Traffic management segregation will be provided between the footpath and the road carriageway along Pigeon House Road.

In response to observations submitted on file it is noted that the proposed development will in no way compromise any potential alignment for a future eastern bypass.

Brief of evidence by Mr. Thomas Burns in relation to Visual Impact and landscaping

This brief of evidence (B.1.6) primarily deals with the potential impact arising from some immediate works to be carried out on site including the implementation of the effluent of fine screens which is to be incorporated as part of the immediate works. The visual impact resulting from the wastewater treatment extension is referred to in the submission but is noted that at the visual impact arising from the main works to be carried out have been addressed in the EIS.

It is concluded that given the nature of the area and the distances over which the changes in layout will be viewed - that the impact will be minor.

Brief of evidence by Deirdre O'Hara in relation to soils, geology and hydrogeology

The submission (B.1.7) describes the existing environment. It states that the predominant rock type along the line of the proposed long sea outfall tunnel is muddy limestone comprising of inter-bedded dark grey to grey limestone and a dark grey black calcareous mudstone. Marine sediments encountered within the Bay varied from 8-20 metres in thickness the rock underlying the site and the roof of the outfall is classified as LI (Locally Important aquifer – unproductive except for local zones). There is a direct hydraulic connection between the water in the estuary and the water underlying the tunnel inlet shaft. Groundwater testing at the tunnel inlet shaft location was found to be seawater dominated due to the high chloride content. It is noted that the Irish Town Nature Park was previously used as a tip head by Dublin City Council. The impacts from the proposed development will involve the transporting of approximately 340,000 cubic metres of rock and overburden. It is noted that some of the material found in the overburden may not meet the inert waste acceptance criteria but nor does it meet the hazardous waste criteria and therefore will be acceptable to be landfilled as non-hazardous waste. Medical waste was encountered in some of the samples and this will require to be disposed to a hazardous landfill. All spoil and waste will be removed by licenced waste contractors.

Details of other mitigation measures to be employed in the management of contaminated material and spoil disposal and the management of groundwater and water are set out in Section 2.4.1 and 2.4.2 of the brief of evidence.

Brief of evidence by Robert Gaudes and Dawn Keating in relation to Air Pollution and Odour

This submission (B.1.8) dealt with both general air quality and specifically with the issue of odour. In terms of odour it is stated that odour control improvements have significantly reduced odours from the Ringsend wastewater treatment plant, however immediate upgrades will result in further odour reduction. The existing odour concentration is indicated in Figure 1.

The main immediate upgrade works which will improve odour include

- The sludge dryer buildings
- The implementation of the main odour control unit
- The enclosure and venting of the preliminary screenings and the screening buildings and
- The incorporation of a grit skip enclosure.

The odour contour plot depicting the maximum extent of odours that may be detected at the levels of 10 odour units are indicated in a series of isopleth maps in the submission. A separate aerial photograph is attached to the submission indicating the 10 odour unit contour map in post completion. This map indicates that at the exception at the part of Goose Green and the northern part of Irishtown Nature Reserve and a small incursion into the adjoining waste to energy Covanta site the 10 odour unit contour is located within the site.

In terms of air quality it is stated that all air quality parameters (PM₁₀, NO₂, CO and Benzene) are all within the ambient air quality standards set out in the 2011 Regulations and the CAFE Directive.

The planning inspector informed Mr. Gaudes that it was not unusual for An Bord Pleanála to set more stringent odour limits of either 5 or 3 OU at boundaries. Mr. Gaudes argued that such standards are essentially unenforceable particularly in urban areas where baseline odour levels are likely to be in and around 10 odour units. Furthermore he suggested that 10 odour units was equivalent to the standards set out in the 1997 EIS standard of five parts per billion by volume of hydrogen sulphide (H₂S). When the planning inspector made reference to the UK Government Guidelines for odour (DEFRA Guidelines March 2010) Mr. Gaudes pointed out that these standards are specifically not applicable to sewage treatment works and makes reference to 7.2.3 of the said Guidelines where it is suggested that such conditions in relation to new or existing sewage treatment works would not be enforceable as such low concentrations are problematic to measure.

DAY 2

Brief of Evidence by Mr. Jacob Vested in relation to Hydraulic Modelling

In Mr. Vested submission (B.1.9) he stated was technically responsible for studies associated with the proposed development. He outlined the methodology employed in the model and details of the hydraulic model calibration and validation. The long sea outfall model data inputs included two flow conditions for the existing discharge of 5.14 m³/s and from the proposed discharge of 6.9 m³/s.

The model indicated that as a result of the relocated outfall to Dublin Bay, the impact of wastewater treatment discharge in the inner Bay area and particularly with respect to waters around Bull Island, are significantly reduced in terms of concentrations of DIN and MRP. Likewise the concentration of E-coli are significantly reduced in the Inner Bay area. It is concluded that the water quality standards are attained as a result of the relocated outfall and therefore no mitigation measures are required in relation to the operational phase.

Brief of Evidence of Aislinn Collins, Archaeology

The brief of evidence (B.1.10) outlines the methodology which was employed in the archaeological and horticultural heritage survey. In terms of impact the construction works will not directly impact on any other structures including the Record of Protected Structures in the vicinity. Likewise no adverse impacts are anticipated during the operational phase.

It was noted that there were a number of anomalies identified during the borehole surveys along the seabed. These will be subject of an archaeological dive inspection in order to clarify the nature and extent of the anomalies identified. All mitigation measures contained in the EIS will be carried out in full.

Brief of evidence by Eugene McKeown in relation to Noise and Vibration

Airborne noise was examined under both the construction and operation phases of the proposed development in the submission (B.1.11). The existing environment is described. Airborne background noise levels ranged between 51 and 52dB(A) during the daytime period on a consistent basis. The airborne noise levels around the Ringsend area are monitored on a long-term basis by Dublin City Council and noise levels in the region of 48-53dB(A) have been recorded and. Short term L_A90 levels during the daytime period are in the order of 63-70dB(A).

Underwater noise levels in the shallow areas of Dublin Bay are highly variable due to the nature of the shallow topography of the Bay.

The airborne noise impacts will be primarily due to construction activities inside the proposed tunnel shaft construction site and the haulage of material off-site. The noise models for these activities indicate that while construction activities may be audible under certain meteorological conditions, the noise impact from the construction activity is characterised to be at worst, minor and generally negligible. It is stated that the mitigation measures are set out in Section 14.6 of the document.

At the end of the presentation the inspector asked questions as to why the model results and isopleth maps concerning the noise levels associated with the extension of the wastewater treatment plant were not contained in the EIS and further asked questions as to why the cumulative impact in terms of noise was not modelled where all construction activities and traffic haulage routes were operating at the same time. Mr Mc Keown acknowledged this this information should have been included in the EIS but nonetheless stressed that overall impact of all activities operating simultaneously would still be negligible. It was also considered that the pile driving associated with the tunnel shaft would represent a worst case scenario in terms of noise.

Mr. Eoghan McManus on behalf of the applicant (submission B.1.12) then made some concluding remarks in relation to the overall proposal.

That concluded the submission on behalf of Dublin City Council.

Questions and cross-examinations by SAMRA

Mr. Niall Handy legal representative on behalf of SAMRA put a number of questions to each of the witnesses on behalf of Dublin City Council. It is not proposed to summarise all the questions and cross-examinations in detail as a full transcript of the questions and cross-examinations are contained on the recordings of the oral hearings attached to the file.

Questions to put to the applicants in relation to

- The cost of the overall proposal (€270 million). Details of the breakdown of costs were also discussed.
- Questions were asked in relation to the proven technology of the deep shaft aeration tanks proposed to be located underground.
- Questions were asked in relation to the various alternatives that were considered in complying with the parameters set out in the Water Quality Regulations. Mr. Gaudes outlined the technology behind the deep shaft aeration tanks.
- Questions were also asked in relation to the evaluation of the various locations for the diffuser shaft within Dublin Bay. It is suggested that the preferred location (B3) may have adverse environmental impacts for Dublin Bay. It was suggested that extension of the outfall beyond the Beaufort Bank to B3 would be more appropriate. It is also suggested that a more robust archaeological assessment should have been carried out in relation to the suitability of the diffuser shaft at B3 prior to lodging the application. It was suggested that if any major archaeological find in the vicinity of B3 was to be unearthed this would require further detailed assessments of the environmental impact.
- Mr. Handy then put a number of questions to Mr. Vested in relation to the model and defining the parameters of the computer model. Mr. Vested suggested that a relocation in the diffuser shaft of up to 500 metres would be necessary before it would have any impact on the dispersion plumes in the model.
- Questions were also asked in relation to whether or not it was appropriate to continue to expand the existing wastewater treatment plant at Ringsend with a new regional wastewater plant will come on stream in north County Dublin. It is suggested that the existing plant at Ringsend is on a very restricted site. Mr. Eoghan McManus on behalf of the applicant suggested that it was always envisaged that the plant would be upgraded to its ultimate capacity.
- Mr. Handy then put a number of questions to Mr. Richard Nairn on ecology particularly in relation to the proposed designation of Kish Bank as an SAC.
- Questions were also put to Mr. Brendan O'Connor in relation to the potential implications of jacking up the ringing platform for the diffuser shaft and its implications on marine ecology.
- Questions were also asked as to how exactly the marine mammal observer ensures that no marine mammals encroach the exclusion zone during the construction of the diffuser shaft.
- In the afternoon Mr. Handy continued the questions and cross-examining in relation to traffic. Questions were put to Mr. Deegan in relation to potential pedestrian HGV conflict of Poolbeg Road leading to the South Bull Wall.

- Questions were also put in relation to the sensitivity analysis and the potential impact of HGV movements on the road network. Mr. Deegan indicated that the traffic surveys suggest that after the traffic has left the Sean Moore Roundabout towards the East Link Bridge the traffic becomes very dilute and has little impacts on the road.
- Questions were also put to Mr. Deegan in relation to the relatively short time under which the traffic survey was undertaken. It was also suggested that it was unjust that HGV traffic would be banned from the City Centre particularly at night time whereas residents of Ringsend and Sandymount will have to suffer from HGV movements in terms of noise. Some discussion took place in relation to the Ratio of Flow Capacity of the various junctions in the vicinity of the site.
- Questions were asked in relation to parking facilities for construction staff and whether or not requisite parking was being provided offsite. Mr. Gaudes noted that 70 car parking spaces will be provided off-site for construction workers and Mr. Deegan suggested that there is a high level of car-pooling amongst construction workers coming to and from the site and as such the car parking should be acceptable.
- A number of questions were put to Mr. Deegan in relation to the pedestrian facilities along the Poolbeg House Road leading towards the South Bull. Miss Lorna Kelly on behalf of SAMRA provided photographs indicating that there was originally a footpath along the southern side of the Poolbeg Road which has subsequently become overgrown and would be much more suitable in terms of pedestrian safety measures. Dublin City Council stated that they would explore this option but noted that it would impinge on an SAC and therefore may require Appropriate Assessment.
- Mr. Handy then put a number of questions to Miss O'Hara in relation to soils and hydrogeology. Mr. Handy expressed concerns in relation to the number of soil samples taken from site which could not be accredited in the laboratory. It also suggests that some of the results (for PCBs etc.) were not reliable for the purpose of the assessment. Mr. Handy suggested that Dublin City Council could not stand over conclusions drawn from the raw data presented in the EIS when a considerable proportion of these samples selected could not be accredited in a laboratory.
- Concerns were also expressed that medical waste was found in some of the soil samples. And that this issue is not mentioned in the EIS. Photographs were passed around for Miss Lorna Kelly (SAMRA) which indicated that the area surrounding the site was used as an old tip head and therefore soils associated with the site are likely to be contaminated. This issue should have been more fully investigated before the application was submitted to the Board for approval. Mr. McManus on behalf of Dublin City Council indicated that additional testing and further investigation are on-going on site.
- Mr. Handy then moved on to the issue of odour and noted that there was a long and contentious history in relation to odour problems in the area. It is suggested that Mr. Gaudes has acknowledged that there is a difficulty in treating odour units to a concentration of less than 10 OU. The Residents Association are very concerned in relation to air quality and odour.
- A number of questions were put to Mr. Burns in relation to landscape. Miss Laura Kelly (SAMRA) expressed concerns that the proposed development

particularly during the construction phase will give rise to visual amenity problems. Miss Kelly lamented the fact that one of the most picturesque areas in Dublin has been destroyed by industry both port related and non-port related over recent decades. It is suggested that there is a limit as to how much this area can assimilate in visual amenity terms.

- A number of questions were then put to Miss Aislinn Collins in relation to marine archaeology particularly in relation to the possibility of finding a feature of archaeological significance on the seabed which may require the relocation of the diffuser shaft, which in turn could have carry on implications for the overall project in terms of EIA and AA etc.
- Subsequently a number of questions were put to Mr. McKeown in relation to noise and vibration. Mr. Handy suggested that the noise model should have taken into consideration and evaluated in more detail the noise implications for the residents on Sandymount Road to the south of Sean Moore Park and also for the residents in houses behind the Sandymount Road which would be more sensitive to noise levels. Mr. McKeown suggested that the noise model which is run by Dublin City Council is very accurate and that there was no necessity to model at points beyond those identified in the EIS.
- A number of questions were also put to Mr. Vested in relation to the hydraulic model which was used to ascertain nutrient plumes within the bay. Questions were asked in relation to the decay rates of microorganisms which were used in the model. Mr. Vested indicated that the decay rates used for the microorganisms were in line with those used throughout the European Community. He also noted that earlier modelling had been undertaken in the Bay for the purposes of earlier studies and these decay rates for microorganisms were used in the model presented under the current application.
- Questions were also put to Mr. Vested in relation to the implications of having to relocate the diffuser shaft, in the case where archaeological findings on the seabed necessitated such relocation. Questions were posed in terms the potential implications from the expected plumes in the Bay. Mr. Vested indicated that moving the diffuser shaft a couple of metres in any one direction would not have any appreciable effect on the plume dispersion within the Bay. Mr. Vested indicated that the diffuser shaft would have to be relocated in the order of 500 metres from its current position before any appreciable effect could be identified on the plume.
- At this point in the hearing the simulation model of the plume within the Bay was presented at the hearing. Mr. Gaudes made some comments in relation to the model and indicated that in the case of MRP, the existing outfall from Ringsend was the major contributor to MRP in the Inner Bay and this would be removed as a result of the relocation of the outfall. He also stated that the model indicates that the plume may in some cases enter designated waters at concentrations above those set out in the Surface Water Regulations however these concentrations do not represent medium concentrations within the designated waters and as such do not contravene the Regulations. Mr. Handy put a number of other questions to Mr. Vested in relation to the data and calibration of the model. Mr Vested explained in some technical detail, the principles behind the modelling.
- Mr. Joe McCarthy on behalf of (SAMRA) asked whether or not other alternatives were considered in the design layout including building a new de-

nitrification plant on site and the construction of new Sequencing Batch Reactors above the stormwater drainage tanks to the north of the site. Mr. Gaudes indicated that there could be no confidence that the structural foundations would be such to support SBR tanks over the storm overflow tanks. Mr. McCarthy also suggested that lands may well become available on the adjoining COVANTA incinerator site for the future extension of the wastewater treatment plant should the incinerator not go ahead. It was suggested by Mr. Mc Manus that any use of the COVANTA site for the purposes of expanding the WWTP would be out of the question as there is an extant permission for a waste to energy plant on this site.

- Finally a number of questions were put to the applicant in relation to the disposal of spoil from the site and the tunnel shaft. Dublin City Council responded that this material will be disposed of in licenced landfills or in the case of obtaining a licence for same, the spoil could be dumped at sea.

That concluded the questions and cross-examination on behalf of the observers.

Formal Submission of the Sandymount and Merrion Residents Association

The Inspector then called upon the Sandymount's and Merion Residents Association to make a formal submission to the hearing. Mr. Handy on behalf of the association indicated that he would be making a short legal submission followed by a planning submission and then he would call upon two other members of the association, Mr. Joe McCarthy and Miss Claire Wheeler to give evidence on its behalf.

Legal Submission on behalf of the Sandymount and Merrion Residents Association

Mr Handy Submission

The legal submission argued that there were errors in the procedure in which the present application has been submitted and therefore the application is compromised and that further steps are required before an oral hearing can lawfully proceed. In particular it is argued that the exercise of the screening for the Appropriate Assessment which was carried out by the applicant is in fact unlawful. According to the legislation it is suggested that any screening should have been carried out by An Bord Pleanála in accordance with the relevant legislation (which is cited in the submission). It is argued that the Board was the competent authority in relation to the screening exercise in respect of the proposed Local Authority Development and for development of the foreshore. It is argued that in pursuant of Section 177U(1) of the Planning and Development Act, the obligation to conduct a screening exercise in respect of the proposed development is vested at all times in the Competent Authority i.e. An Bord Pleanála. and that the Bord must carry out a screening for Appropriate Assessment before a consent for the proposed development is given. SAMRA submits that the Board must conduct the screening exercise before proceeding to consider the balance of the application. This screening exercise should have been completed in advance of the oral hearing.

Planning Submission on behalf of the Sandymount and Merrion Residents Association

Mr. Handy then went on to present the planning arguments against the proposed development on behalf of SAMRA.

The grounds submit that the Environmental Impact Statement submitted with the application was inadequate on a number of grounds including the following:

Project Need

It is suggested that the applicant relies on an outdated preliminary report for the original wastewater treatment works dated May 1993, as justification for the proposed development. The Greater Dublin Strategic Drainage Study which was published in 2005 has various recommendations of which, the maximisation of capacity at Ringsend was only one such recommendation. It is considered that it would be premature to develop the existing Ringsend works to its maximum capacity, and to build a long sea outfall at extraordinary financial cost in circumstances where the orbital sewer which is recommended by the GSDS was not advanced. This would result merely in creating capacity first and then attempting to fill the capacity later. It would be premature to develop the proposed 100-year facility at Ringsend without first completing the planning phase of the north County Dublin wastewater treatment works facilities. The creation of a 100-year facility at Ringsend without first finalising capacity planning across the region undermines the need for the proposed development. The need to meet the effluent standards set out in the EU Wastewater Treatment Regulations does not justify the extraordinary cost of creating a long sea outfall for secondary treated wastewater. The applicant has presented no analysis of the cost of the proposed development relative to the anticipated cost of developing alternative capacity elsewhere.

Alternatives

In terms of the consideration of alternatives, the EIS submitted with the proposed development has given no consideration to the creation of alternative capacity at the proposed north Dublin facility. It has further failed to consider the alternative costs of appropriately upgrading the existing municipal wastewater treatment facilities in Dublin. The extraordinary costs of building a long sea outfall alone are premature and entirely disproportionate when it is considered that no sophisticated modelling of alternatives have been assessed in the EIS.

Traffic

In terms of traffic it is considered that the cumulative impact resulting from other developments which will involve HGV trips will have a significant impact upon pedestrian users. It is noted that there is no forecast for car movements included in the assessment. The data contained in the EIS in relation to pedestrian movement particularly is based on a very short survey period.

In terms of marine data modelling, dispersion of the plume from the sea outfall is inadequate. While the Residents Association is not in a position to make any technical

submissions in respect of the quality or otherwise of the modelling software used, the observers criticise the baseline data on which the model is calculated. Again the model is based on calibration data obtained during a short window of time namely a 5-day period during April 2010 and a 4-day period during May 2010. It is noted that no other times of the year are modelled. Nor were equinox tides modelled during which sea levels are higher and more active. Thus it is submitted that the entire assessment of the potential adverse impact on European sites within the Bay are based on inadequate water modelling.

European Sites

Reference is made to Article 6.3 of the Habitats Directive which highlights the fact that there should be no reasonable scientific doubt remaining in relation to potential impacts on a European site. Thus the Board may only authorise development if it can be concluded that no reasonable scientific doubt remains.

Odour

In terms of odour control the observer submits that the application has a very well-known and very poor track record with regard to odour control. Reference is made to the operators contract under the first phase of works which permitted an odour limit of 20 times higher than that quoted in the EIS (100 parts per billion hydrogen sulphide as opposed to 5 parts per billion). Comments from Mr. Gaudes suggested that anything below 10 odour units would be unenforceable, yet notwithstanding this the Inspector indicated that a typical Board condition of 5 odour units is often used as a boundary limit.

Seveso

The submission also makes reference to the fact that no proper Seveso assessment has been undertaken as part of the EIS.

Noise

In terms of noise, the City Council made constant reference to the fact that the site is located in an industrial area. The applicant rejects this and states that the proposed development is in fact located in close proximity to a residential area and this should have been taken into consideration in the noise assessment. Further information should have been provided in relation to noise complaints received from Dublin Port and the proposed development should incorporate a cumulative assessment of noise resulting from construction works at each site being carried out simultaneously. Thus the overall impact on amenity is deemed to be unacceptable.

Submission by Ms Laura Kelly

Mr. Handy then called upon Miss Kelly to make a submission on behalf of SAMRA. Miss Kelly stated that she had serious reservations regarding the continued erosion in terms of amenity of the lands at Poolbeg and South Dublin Bay. The proposed development will downgrade Dublin Bay in its entirety. The site is always referred as being located in Ringsend when in fact, according to Miss Kelly, the site is located in

Sandymount Strand. It is also stated that there is a considerable lack of trust of the applicants in that on that little or no consultation took place. The residents of Sandymount believe that they have been presented with a *fait accompli*. Also concerns were expressed in relation to community loss and the constant erosion of public open space in the area and it is suggested also that the beach area is being taken away as a result of on-going development. Miss Kelly also expressed concern that with the proposed incinerator next door together with the potential dumping of tunnel spoil at sea associated with the current application, there may not be enough jetty space to facilitate all activities in the area. In terms of pest control it should be ensured that any such control measures in no way result in the poisoning of birds in the area.

Submission of Mr Joe Mc Carthy

Mr. Handy then called upon Mr. Joe McCarthy on behalf of SAMRA to make his submission. Mr. McCarthy's submission primarily dealt with the issue of air pollution. Reference is made to the previous oral hearing associated with the application for the waste energy plant at Poolbeg. It is stated that during the course of that hearing the observers made many submissions to the Board indicating that PM₁₀ levels in the area were constantly being exceeded and that this was not being picked up by the EPA in their air monitoring control. PM₁₀ levels were being exceeded six or seven times a month (50 µg/m³). It is also suggested that Dublin City Council have not positioned air pollution stations appropriately in Poolbeg where the exceedance is apparent. The inspector asked Mr. McCarthy to provide evidence in relation to exceedance of PM₁₀ in the Poolbeg area. Mr. McCarthy indicated that this information will be made available tomorrow.

Submission of Ms Claire Wheeler

Ms Claire Wheeler then made the final submission on behalf of SAMRA and again reiterated that no proper consultation has taken place in relation to the proposed development and outlined the history of the problems associated with the existing wastewater treatment plant in the area and there was little or no discussion in relation to the expansion of this facility. She states that between a third and half the population of the country are discharging effluent into this one wastewater treatment plant which is discharging into a shallow bay which in turn designated as environmentally sensitive. It is also stated that the area is prone to flooding.

Miss Wheeler also made reference to sustainability issues and energy issues and questions the appropriateness of pumping the sewage to sea. Reference is also made to anaerobic digestion as an important source of energy. She also argues that sewage could be considered a resource and refers to the possibility of recycling of the wastewater. It is suggested that algal plumes in the Bay are not a trivial issue and that Dublin Bay as an amenity area should be paramount when planning decisions are made.

That concluded day 2 of the oral hearing and the inspector indicated that he would hear closing submissions on day 3.

DAY 3

Prior to requesting the applicants to embark on their closing submissions, the Inspector invited Mr. McCarthy to provide any additional information in relation to air quality. In response to this Mr. McCarthy made a small presentation on behalf of SAMRA which made reference to various EPA monitoring data which according to his evidence concluded that there have been numerous breaches of the PM₁₀ standards in the Poolbeg area. Mr. McCarthy also made reference to a report prepared by Mr. Brian Broderick consultant on behalf of the Board in relation to the application for the waste to energy plant in Poolbeg. In this report Mr. Broderick acknowledges that the proposal (ie the waste to energy plant) could have an adverse impact on the area in terms of baseline air quality. Mr. McCarthy presented figures which indicated that baseline air quality is being badly breached in the area on a regular basis.

The Inspector then called upon Dublin City Council to make any response in relation to air quality issues. On behalf of Dublin City Council Dawn Keating made the following points. She states that the EPA is the competent authority in air quality modelling nationally. Therefore it is appropriate to use EPA material on its website in assessing the air quality. Dublin City Council is also undertaking an Air Quality Management Plan for the City which seeks to improve PM₁₀ values as well as other air pollutant parameters in the City. The Board should also have regard to the magnitude of impact resulting from the proposed development which is negligible in terms of its overall contribution to air quality and in particular PM₁₀ in the area.

Closing Submissions

The Inspector then requested the various parties to make their closing submissions.

Submission on behalf of Sandymount and Merrion Residents Association (SAMARA)

The closing remarks by Mr. Niall Handy reiterated the legal submission with regard to the screening exercise carried out in relation to the Appropriate Assessment and went on to argue that the EIS was inadequate in dealing with project need in assessing the overall capacity and assessing alternatives. Concerns in relation to the traffic impact were also reiterated, as were concerns regarding the marine data modelling, odour control and the lack of a comprehensive Seveso Assessment. The assessment was not adequately assessed in terms of noise particularly in regard to cumulative effects and the soil sampling and the accredited lab results associated with the sampling are a significant cause of concern and it is suggested that the lands in question may be considered contaminated. Air quality is also a grave concern and it is suggested that the assessment undertaken as part of the EIS is based on selective data. Reference is made to Mr. Broderick's report in relation to the previous application for the waste to energy facility at Poolbeg where he acknowledged that there could be implications for human health. By way of closing remarks Mr. Handy stated that the level of development in the Poolbeg area has been phenomenal and thus the cumulative adverse impact on the local community has likewise been phenomenal and the Board are therefore asked to reject the proposal and refuse planning permission.

Closing Submission on behalf of Dublin City Council

Mr. Dodds, Counsel on behalf of Dublin City Council then made the closing submission on behalf of the applicant. In the first instance he dealt with the legal submission before the Board.

Mr. Dodds went through the legal context of the application specifically referencing those parts of the legislation which were relevant to Appropriate Assessment and the screening exercise associated with Appropriate Assessment.

He concludes as a result of referring to the legislation that the local authority in this instance is the appropriate authority to carry out a screening assessment for an NIS. Mr. Dodds also argued that in a case where an EIA was not required and the Planning Authority had to carry out an AA it would be illogical that the Board would be required to carry out a screening assessment on an AA for a relatively small project, where the Board would not be assessing the application in any event.

In terms of the EIA, it is argued that the EIA process in this instances was not legally flawed and that the EIA sets the context and the framework under which any Environmental Impact Statement is to take place. It is also highlighted that it is a requirement of the applicant to assess the “likely” and “significant” effects of the proposed development and these have been adequately assessed in the EIS. Furthermore it is a requirement of the applicant to assess the potential impact on a European site based on “best scientific knowledge” and it is argued that the impact of the proposed development on intertidal birds has been assessed in accordance with best scientific knowledge.

Also reference is made to legal judgement *Eircell Limited vs. Leitrim County Council* (copy attached). In this Judgement Leitrim County Council revoked a decision to grant planning permission for telecommunication mast. In the legal judgement it was argued that it was not appropriate to revoke the permission based on fears on which the proposed development may invoke. Apprehension and opposition within the local community with regard to the proposed development was not in itself a proper planning consideration. It is argued that the fears expressed in this current application have not been adequately demonstrated to the extent to refuse planning permission.

In relation to planning need, it is argued that it was inappropriate at this juncture to revisit strategic decisions set out in the Strategic Drainage Study and subsequently incorporated into policies in the Regional Planning Guidelines and Dublin City Council.

With regard to alternatives it is argued that the possibility of locating any future expansion on adjoining lands at the waste energy facility is simply not viable as there is an extant permission on this site. It is also stated that Dublin City Council went beyond the requirement for public consultation. In terms of traffic generation it is stated that the road network serving the site is adequately capable of accommodating the traffic generated by the proposed development both by itself and cumulative with other developments in the area.

The modelling carried out in Dublin Bay was appropriately and satisfactorily conducted and the expert evidence presented at this hearing is incontrovertible.

In terms of algae production the Board has been presented with the best scientific evidence available which indicates that there is no link between algae production and birds' food resources.

In terms of odour it is argued that it has been adequately demonstrated in the EIS and throughout the proceedings of the oral hearing that a significant improvement in terms of odour control will result from the proposed development including the immediate works to be undertaken. Issues in relation to odour are more relevant to enforcement and as such cannot be considered a planning consideration. Furthermore the Board should not take a blanket approach in relation to setting odour limits but should assess each proposal on a case by case basis.

In terms of Seveso it is stated that the HSA is the competent authority to assess the proposal in the context of Seveso and reference to Seveso has been made in the EIS.

In terms of soil samples it is stated that only 8 of the 39 samples that were submitted to the laboratory were not accredited. This does not mean that the samples undertaken were not representative. There is no evidence of any wholes scale medical waste. It was an isolated incident.

In terms of noise it is stated that the area has a high background or baseline noise levels and the proposed development is a significant distance away from sensitive receptors. The overall conclusion is therefore that the proposed development will have positive impacts on the area.

Request to make a submission – denied by the presiding Inspector

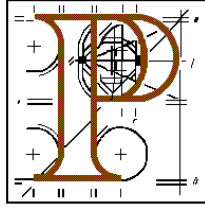
Prior to closing the hearing, Mr. Cassidy, a solicitor on behalf of the Ringsend and Irishtown Environmental Alliance, requested to make a submission to the Board. The Inspector indicated that he had heard closing submissions and he was not in a position to permit anybody to present new evidence at this time in the proceedings. Mr. Cassidy argued that he was not given a chance to make a submission throughout the hearing. The Inspector argued that it was appropriate that anybody who wished to make a submission on the hearing would let themselves be known during the Inspector's role call at the beginning of the hearing and that Mr. Cassidy had ample opportunity to let it be known to the Inspector that he wished to make a submission during the course of the hearing and it was not appropriate to make such a request at such a late stage.

The Inspector refused to accept a submission from Mr. Cassidy but said that he would let it be known to the Board and record in his summary of the proceedings of the oral hearing, that he had in fact precluded Mr. Cassidy for making a submission of the hearing at this late stage. The Inspector also informed Mr. Cassidy that if the Board considered it appropriate - it could reopen the oral hearing in order to specifically facilitate a submission from Mr. Cassidy. Mr Cassidy wanted it put on record that he was being denied the opportunity to make a submission to the Board.



ATTACHMENT B.3.3:
PLANNING APPROVAL, JUNE 2016

An Bord Pleanála



PLANNING AND DEVELOPMENT ACTS 2000 to 2015

Dublin City

An Bord Pleanála Reference Number: 29N.YM0002

(Associated reference number 29N.YA0010)

REQUEST received by An Bord Pleanála on the 19th day of April, 2016 from Irish Water under section 146B of the Planning and Development Act, 2000, as amended, in respect of a strategic infrastructure development described as the Ringsend Wastewater Treatment Works Extension at Pigeon House Road, Poolbeg Peninsula, Dublin.

PROPOSED ALTERATIONS: Consisting of:

- (a) Provision of a temporary construction access onto Pigeon House Road, circa 100 metres west of the main entrance to the Poolbeg Power Station.
- (b) Temporary removal of two small areas of landscaping bunds located on the wastewater treatment plant property along its eastern perimeter.
- (c) Construction of a temporary 'haul road' (circa 80 metres long) connecting the existing internal wastewater treatment plant roads along the southern and eastern boundaries of the site.

WHEREAS the Board made a decision to approve, subject to conditions, the above-mentioned development by order dated the 5th day of November, 2012,

AND WHEREAS the Board has received a request to alter the terms of the development, the subject of the approval,

AND WHEREAS having regard to the nature of the issues involved, the Board decided, in accordance with section 146B(2)(b) of the Planning and Development Act 2000, as amended, not to invite submissions or observations in relation to the matter from persons who had made submissions or observations in relation to the application, the subject of this alteration,

AND WHEREAS the Board decided, in accordance with section 146B(2)(a) of the Planning and Development Act 2000, as amended, that the proposed alterations would not result in a material alteration to the terms of the development, the subject of the permission,

AND WHEREAS having considered all of the documents on file and the Inspector's report, the Board considered that the making of the proposed alterations would not be likely to have significant effects on the environment or on any European site,

NOW THEREFORE in accordance with section 146B(3)(b) of the Planning and Development Act, 2000, as amended, the Board hereby alters the above-mentioned decision so that the approved development shall be carried out in accordance with the plans and particulars received by An Bord Pleanála on the 19th day of April, 2016.

MATTERS CONSIDERED

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.

REASONS AND CONSIDERATIONS

Having regard to the nature, scale and location of the proposed development, the documentation submitted with the request and the report of the Inspector, the Board considered that the requested alterations would be of a minor nature, by reason of their nature, extent and temporary duration in the context of the development as a whole, being a major industrial development. The proposed alterations would, therefore, not be material in terms of the proper planning and sustainable development of the area.

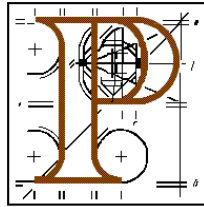
**Member of An Bord Pleanála
duly authorised to authenticate
the seal of the Board.**

Dated this day of 2016.



ATTACHMENT B.3.4:
INSPECTOR'S REPORT, JUNE 2016

An Bord Pleanála



Inspector's Report

Proposed Development

Alterations to permitted Ringsend Wastewater Treatment Works Extension (SID ref.29N.YA0010), Poolbeg Peninsula, Dublin 4.

Applicant:

Irish Water

Planning Authority:

Dublin City Council

Type of Application:

Request to amend the terms of an approved development under section 146B(1) of the Planning and Development Act, 2000, as amended

Inspector:

John Desmond

Site inspection:

25th May 2016

1.0 INTRODUCTION

- 1.1 Irish Water requests that the Board exercises its powers under section 146B of the Planning and Development Act 2000, as amended, to alter the terms of approval for the development of the Ringsend Wastewater Treatment Works Extension, a scheme providing for additional secondary wastewater treatment capacity (400,000 P.E. extension), with c.9km sea outfall and road network improvement.

2.0 LEGISLATIVE PROVISIONS

- 2.1 Section 146B(1) of the Planning and Development Act 2000, as amended, provides that a person who is intending to carry out a strategic infrastructure development may request the Board to alter the terms of the subject approved development.
- 2.2 Section 146B(2) requires the Board to decide (under 146B(3)) whether or not the making of the said proposed alteration would constitute the making of a material alteration of the terms of the development concerned. The Board may invite submissions prior to making this decision (146B(2)(b)). If it decides under 146B(3)(a) that it would not be a material alteration, then it must alter the approval accordingly. If it determines under 146B(3)(b) that it would constitute a material alteration of the terms of the development, before making that determination the Board must first determine, under 146B(4) whether the requested alteration, or any alteration the Board may be considering under 3(b)(ii), would be likely to have significant effects on the environment. Under 143B(3)(b) the Board shall determine whether to (i) make the alteration, (ii) make a different alteration (not being one that would represent a more significant change to the terms of the development) or (iii) refuse to make the alteration. Public consultation procedures under 146B(8) apply in the case of 146B(3)(b) and 146B(4).
- 2.3 Where it is determined under 146B(4)(i) or (ii) that significant effects on the environment *are not likely*, the Board shall alter the approval accordingly. Where it is determined under 146B(4)(i) or (ii) that significant effects on the environment *are likely* the provisions of 146C apply and the Board shall require the requester to prepare an EIS and to publish notices regarding statutory public consultation, after which period that Board may determine the matter under section 146B(3)(b) having regard to various matters set out in section 146C(6).

3.0 RELEVANT PLANNING CASES

3.1 PLANNING HISTORY

3.1.1 An Bord Pleanála Ref. 29n.YA0010. Decision to **GRANT** approval for:

Ringsend Wastewater Treatment Works Extension Project, which will expand the existing wastewater treatment works at Pigeon House Road, Ringsend, Dublin to its ultimate capacity within the confines of its current site and achieve the required discharge standards. The proposed extension includes the following elements:

- Additional secondary wastewater treatment capacity at the wastewater treatment works site (c.400,000 P.E.) including associated solids handling and ancillary works.
- A 9km long sea outfall (in tunnel), commencing at an onshore inlet shaft approximately 350m east of the wastewater treatment works and terminating in an underwater outlet riser/diffuser in Dublin Bay.
- Road network improvements in the vicinity of the site (during the construction phase).

Conditions pertinent to this subject request are as follows:

Condition no.5 – A construction stage environmental management plan (CSEMP), including all construction method statements, shall be prepared by the developer and implemented by the contractor. The developer shall retain responsibility for overseeing, updating and enforcing the construction environmental management plan. The construction environmental management plan shall adhere to the following requirements:

- (a) All preventative and management measures to be applied throughout the construction phase shall be set out so that all potential impacts are minimised, mitigated, or avoided.
- (b) All measures to be employed in relation to spill contingencies, spoil disposal, management of contaminated soil, the selection of slurry additives and drilling fluids.
- (c) Measures set out in the Construction Industry Research and Information Association (CIRIA) on the control and management of water pollution from construction sites shall be adhered to.
- (d) All fuels or chemicals kept on the construction site shall be stored in bunded containers. All refuelling and maintenance of vehicles and equipment shall

be carried out in designated containment areas away from sensitive environments.

- (e) Any waste or hazardous waste residuals or potentially contaminated sludge from spill clean-up shall be stored in appropriate receptacles or containers, or in bunded storage areas prior to their removal by the developer or EPA licenced contractor.
- (f) Any discharges arising from the construction phase shall incorporate silt removal and hydrocarbon removal using a hydrocarbon interceptor.
- (g) Weekly monitoring of the water quality being discharged off the site shall take place during the construction phase.
- (h) Foul sewage shall be transported off site and disposed of by discharging to a licenced sewer network.
- (i) All marine vessel waste generated during the pipeline survey, and any maintenance vessels including marine rigs, shall accord with relevant guidelines including those guidelines from Annex V of the International Convention for the Prevention of Pollution from Ships, as amended. All hazardous waste stored on ships shall be contained in sealed labelled containers and stored in lockable container cabinets. A record of all types and quantities of waste arising on each vessel shall be kept.
- (j) The Guidelines entitled 'Requirements for the Protection of Fisheries Habitats during Construction and Development Works at River Sites' prepared by the Eastern Regional Fisheries Board shall be adhered to in full.
- (k) Management proposals and monitoring protocols for areas of ecology, archaeology, water quality management (both ground and surface), dust management, noise management, traffic management, sediment control, spoil disposal, general pollution control, community liaison, hazardous substance management, environmental training and supervision for personnel.
- (l) Details of the management of all landscaping within the sites and, where appropriate, in the vicinity of the site.
- (m) Details of site managers, contact numbers (including out of hours) and public information signs (including warning signs) at the entrance and, where appropriate, at the boundaries of the site.
- (n) Details of a pest control plan;
- (o) Staff parking shall not be permitted in the public car park in the vicinity of the site and suitable car parking places shall be provided elsewhere.

Upon the commencement of construction, the CSEMP will be reviewed according to a regular timeframe and will be updated if necessary.

Environmental auditing will be undertaken to ensure compliance with the CSEMP.

Condition no.9 – Appropriate reinstatement of all landscaping, earthworks, boundaries and access arrangements shall take place following construction phase and a landscaping scheme implemented in the first planting season following completion of works. Works shall include the dismantling of all temporary construction works and removal of all equipment and other temporary infrastructure on site.

Condition no.11 - All works to be undertaken within and adjacent to Natura 2000 sites within Dublin Bay will be undertaken in accordance with the requirements of a suitably qualified ecologist appointed following consultation with the National Parks and Wildlife Service.

Condition no.13 – A clearly demarcated pedestrian crossing on Pigeon House Road to the east of the wastewater treatment plant, together with the construction of a railing along the footpath on the northern side of the Pigeon House Road and a slip form kerb barrier, shall be provided along the southern side of Pigeon House Road and shall be constructed prior to the commencement of development. Access arrangements for pedestrians shall be monitored on a weekly basis throughout the construction period. Where it is decided that pedestrian access arrangements to South Bull Wall and surrounding amenity area are adversely affected during the construction period, appropriate measures shall be incorporated to minimize any impact on pedestrian access arrangements.

3.2 CURRENT RELEVANT PLANNING CASES

3.2.1 Ref.no.29SPC0203 – Current private consultation development concerning revisions to the Ringsend Wastewater Treatment Plant, granted approval under reg.ref.no.29N.YA0010, at Poolbeg Peninsula, Dublin 4. The 3 main elements of the revised proposal are:

- The employing of a new technology (aerobic granular sludge technology) in lieu of the permitted secondary treatment process which involved the modification of the existing SBR's on to carbonaceous mode only.
- The omission of the permitted long sea outfall tunnel.
- Use of the existing outfall at the Liffey Estuary.
- Ancillary and sundry works, including, inter alia, alterations to the entrance and circulation in and around the site.

4.0 THE PROPOSED ALTERATIONS

4.1 **Alteration 1** – Provision of temporary construction access onto Pigeon House Road, c.100m west of the main entrance to the Poolbeg Power Station.

Alteration 2 – Temporary removal of two small areas of landscaping bunds located on the WWTP property along its eastern perimeter.

Alteration 3 – Construction of a temporary ‘haul road’ (c.80m long) connecting the existing internal WWTP roads along the southern and eastern boundaries of the site.

5.0 APPLICANT’S SUBMISSION

5.1 The applicant is of the opinion that the requested alterations are non-material, i.e. the provisions under section 146(B)(3)(a) apply, for the following reasons:

- The alterations are exclusively for temporary works during construction and are located almost exclusively within the existing treatment works site footprint itself.
- They increase the overall level of excavation on the project by less than 0.5%, with negligible increase in new construction work (i.e. non-excavation work) associated with the alterations.
- The AA screening report concludes that there will be no impact on a Natura 2000 Site, either individually or in-combination with other projects, with similar conclusions in respect of environmental impacts other than on Natura sites.
- But for the proposed temporary construction entrance giving access to a public road (the surfaced carriageway of which exceeds 4m in width), it is Irish Water’s view that all of the proposed temporary works could reasonably have been considered to be within the scope of project consent ref.29.YA0010.
- The visibility splay at the entrance fully complies with NRA/DMURS design standards. No hazard, delay or obstruction to traffic will arise as a result of the new entrance and traffic management (and health and safety) both within and without the site will be improved.

5.2 **Project Report** – The main conclusions can be summarized as follows:

- No impacts are envisaged on human beings, flora and fauna, soil, water, air, landscape, material assets and the cultural heritage factors of the environment.

- In particular, the report explains why no landscape and visual impacts, no traffic impacts on archaeology and cultural heritage or on material assets are anticipated.
- Engineering review – No concerns.
- Appropriate Assessment – No significant direct or indirect effects.

6.0 ASSESSMENT

6.1 *Materiality of the Requested Alterations*

6.1.1 The main considerations as to whether the requested alterations may be considered material or not relate to:

- the nature and extent of the development granted approval under the application 29N4.YA0010,
- the extent and character of the alteration requested, which is of temporary duration for the purposes of construction of the approved development
- the principle impacts that would potentially arise from same, being traffic impacts.

6.1.2 Approval 29N4.YA0010 is for a major industrial development, principally comprising an extension of the secondary wastewater treatment capacity at the wastewater treatment works site by c.400,000 P.E, with c.9km outfall to sea and ancillary road improvement works.

6.1.3 The requested alterations, comprising a new entrance, an internal haul road of c.80m in length and removal of two landscaped berms totaling c.2000-sq.m, for a temporary period during construction of the approved development, are relatively minor in character and extent.

6.1.4 I consider the principle planning considerations to concern *Road design and traffic issues*. In my opinion there is no issue, in principle, with the proposed opening of a temporary entrance on this industrial road where the 50kph speed limit applies. The entrance is proposed to reduce the traffic using the existing main entrance (to the west) and the additional entrance and access road permitted to the southeast (now in situ), segregating the traffic from HGV / deliveries using the southeast entrance and from Operators traffic using the west entrance. Site offices and welfare facilities will be installed off the proposed entrance / access route. I consider this to be reasonable and acceptable in principle.

6.1.5 The applicant submits that the sightlines achieve visibility of 70m from a 2.4m setback, commensurate with a 50kph design speed in TII TD 41-42/11, and in excess of the 45m visibility required in DMURS for 50kph speed limit currently in place on Pigeon House Road comply with NRA DMRB and with the Departments DMURS standards. The visibility splays are shown on drawing no.15/086/00/0815 (horizontal) and 15/086/00/0816 (vertical). The visibility splays on drawing no.15/086/00/0815 are not shown as per TD 41-42, are incorrect and should be shown to the nearside edge of the carriageway, not the middle of the carriageway. However, the DMURS standards are the applicable standards in this instance, being an urban area where the speed limit is at or less

than 60kph. The required sight distance is 45m, corresponding with the safe stopping distance, which can be easily achieved at the proposed location.

- 6.1.6 There is no pedestrian footpath on the nearside of the road (there is a footpath on the far side) and therefore I do not consider it necessary to design the junction to accommodate pedestrian movements across the junction. The radius to the left hand corner of the junction measures c.9m and accords with that allowed for under DMURS for junctions frequented by larger vehicles.
- 6.1.7 In terms of traffic generation, it is submitted that the proposal will result in 0.5% increase in total number of construction trips due to an increase of 0.5% in excavation works required under the requested alterations. The purpose and proposed sequencing of the requested alterations (to be undertaken in advance of the main design-build contract for the WWTP extension), the alteration works will not coincide with the main extension works and therefore there will be no change in peak AM and PM traffic volumes previously assessed by the Board.
- 6.1.8 The applicant submits that the requested alterations will result in construction traffic no longer needing to enter the main operational entrance and that it is envisaged that a significant volume of extension works traffic will also pass through the WWTP site rather than continuing along the Pigeon House road to use the east entrance. Although this has not been quantified, the applicant submits that this will enhance the protection and safety of public road users and works staff during the construction period.
- 6.1.9 Pre-planning correspondence (23/02/15) from Eoghan Madden C.Eng, Roads and Traffic Planning Division of DCC, appended (4) to the Project Report, indicates that there was no objection in principle and that the proposed entrance did not constitute a traffic hazard.
- 6.1.10 I have reviewed the contents of the traffic assessment forming part (chapter 12) of the EIS attached to permitted development YA0010, noted the content of observations to that file pertaining to traffic and transport issues on that case and the report of assessment of the Planning Inspector, in addition to the decision of the Board and conditions attaching thereto.
- 6.1.11 Having regard to the foregoing, I consider there to be no material traffic and road safety impacts arising from the requested alterations.
- 6.1.12 Therefore, having regard to:
- the nature and extent of the development approved under the application 29N4.YA0010,
 - the extent and character of the alteration requested, which is of temporary duration for the purposes of construction of the approved development,

- the absence of material planning impacts, in particular in respect of traffic and road safety,

it is considered the alteration requested would not constitute the making of a material alteration of the terms of the development concerned within the meaning of section 146B(2)(a) of the Planning and Development Act 2000, as amended. The Board should, therefore, make its decision in accordance with section 146B(3)(a) and there is no requirement for the Board to consider the significance of environmental effects.

6.1.13 However, I would alert the Board that, in advance of making a decision on this matter under section 146(3), it may invite submissions from Dublin City Council, (or from other such persons or class of persons, which class may comprise the public if the Board so determines) under section 146(2)(b) as whether the alteration requested constitutes the making of a material alteration.

6.2 *Appropriate Assessment*

6.2.1 In the making of the current request to the Board and in support of same, the applicant has submitted an Appropriate Assessment – Stage 1 Screening report in Appendix 3 of the Project Report.

6.2.2 The Stage 1 AA Screening Report considered 19no. European Sites within 15km. Having regard to the qualifying interests of the European Sites, the Stage 1 Screening assessment concluded that, without any scientific doubt, the proposed works would not have significant negative effects (direct or indirect), on their own or taken in-combination, on the Natura 2000 network. Based on the Stage 1 appropriate assessment, a Stage 2 ‘Appropriate Assessment’ under Article 6(3) of the Habitats Directive 92/43/EEC is not warranted.

6.2.3 The Stage 1 AA considers the Qualifying Interests of the Natura 2000 sites concerned, but has had no regard to the Conservation Objectives which is contrary to the requirements of the Habitats Directive (92/43/EEC) and to Departmental guidance and to the Board’s Advice Note 1.

6.2.4 I consider only two sites to be of concern in this instance, by virtue of their proximity and therefore the possibility of source-receptor pathways to exist.

1 Dublin Bay Special Area of Conservation site no.000210

The Conservation Objectives for the site are:

To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in South Dublin Bay SAC, which is defined by the following list of attributes and targets:

- Habitat area - The permanent habitat area is stable or increasing, subject to natural processes.

- Community extent - Maintain the extent of the *Zostera*-dominated community, subject to natural processes.
- Community structure *Zostera* density - Conserve the high quality of the *Zostera*-dominated community, subject to natural processes
- Community distribution - Conserve the following community type in a natural condition: Fine sands with *Angulus tenuis* community complex.

2 South Dublin Bay and River Tolka Special Area of Conservation Site no.004024

The Conservation Objectives for the site are:

To maintain the favourable conservation condition of 12 of the 13 species Special Conservation Interest (Annex I species) (Grey Plover is proposed to be removed as a SCI) in South Dublin Bay and River Tolka Estuary SPA, which is defined by the following list of attributes and targets:

For 9no. of the species of Special Interest – Light bellied brent goose, oystercatcher, ringed plover, knot, sanderling, dunlin, bar-tailed godwit, redshank and black-headed gull:

- Population trend – Long term population trend stable or increasing for).
- Distribution – No significant decrease in range, timing or intensity of use of areas by 9no. of the species of Special Interest.

For roseate tern, common tern and arctic tern:

- Passage population – no significant decline.
- Distribution of roosting areas – no significant decline.
- Prey biomass – no significant decline.
- Barriers to connectivity – no significant increase.
- Disturbance at roosting site – human activities should occur at levels that do not adversely affect the numbers of the species of Special Interest.

For common tern:

- Breeding population – no significant decline.
- Productivity rate – no significant decline.
- Distribution breeding colonies – no significant decline.
- Disturbance at breeding site – human activities should occur at levels that do not adversely affect the breeding common tern population.

For wetlands (A999):

To maintain the favourable conservation condition of the wetland habitat ... as a resource for the regularly occurring migratory waterbirds that utilize it, as defined by the following attribute and target:

- Habitat area – The permanent area occupied by wetland habitat should be stable and not significantly less than that occurring from natural patterns of variation.

- 6.2.5 The requested alteration, in itself or taken in combination, will likely have no significant direct effect on the Conservation Objectives of either aforementioned European Site, as defined by the aforementioned attributes and targets as the project is not located within but adjacent to the European Sites, and the site subject of the request for alteration is brownfield site, on made ground, with artificial surfaces and recently constructed berms (c.2003) covered in young mixed woodland species that do not form habitat to the species of Species Concerned.
- 6.2.6 The proposed works will entail an increase of 0.5% in excavation works and corresponding traffic, which reasonably be regarded as negligible in terms of potential to disturb species concerned. In addition, the Stage 1 AA notes that the requested alteration works will incorporate the necessary avoidance measures as identified in the EIS and NIS and the in the Board's conditions attaching to Grant of Approval ref.29N.YA0010, in particular conditions nos.5 and 11, to ensure the avoidance of any polluting substances from entering the adjacent Natura 2000 sites (South Dublin Bay and River Tolka Estuary SPA and South Dublin Bay SAC). It therefore is not anticipated that the requested alterations will have a significant effect on the said adjacent Natura 2000 sites.
- 6.2.7 It is reasonable to conclude that on the basis of the information on file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on European Site no.000210 (Dublin Bay Special Area of Conservation) and would not be likely to have a significant effect on European Site no.004024 (South Dublin Bay and River Tolka Estuary Special Protection Area), or on any other European site, in view of the site's Conservation Objectives, and a Stage 2 Appropriate Assessment (and submission of a NIS) is not therefore required.

7.0 RECOMMENDATION

7.1 I recommend that the Board –

- (a) makes a determination under section 146B(3)(a) of the Planning and

Development Acts 2000-2011 that the making of the alterations to which this request relates would **NOT** constitute a material alteration to the terms of the development concerned,

(b) should alter planning permission ABP Ref. 29N.YA0010 as requested and in accordance with the following draft order:

Request received by An Bord Pleanála on 19th April 2016 from Irish Water under Section 146B, Planning and Development Act, 2000, as amended, in respect of a strategic infrastructure development described as the Ringsend Wastewater Treatment Works Extension Project, which will expand the existing wastewater treatment works at Pigeon House Road, Ringsend, Dublin.

Proposed Alterations comprise:

Alteration 1 – Provision of temporary construction access onto Pigeon House Road, c.100m west of the main entrance to the Poolbeg Power Station.

Alteration 2 – Temporary removal of two small areas of landscaping bunds located on the WWTP property along its eastern perimeter.

Alteration 3 – Construction of a temporary ‘haul road’ (c.80m long) connecting the existing internal WWTP roads along the southern and eastern boundaries of the site.:

WHEREAS the board made a decision to grant approval for the Ringsend Wastewater Treatment Works Extension Project, subject to conditions, by order dated 16th November 2012,

AND WHEREAS the Board considered that the requested alterations, either alone or in combination, would not result in a material alteration to the terms of the development, the subject of the grant of approval.

NOW THEREFORE in accordance with Section 146B(3)(a), Planning and Development Act, 2000, as amended, the Board hereby makes the alteration requested.

MATTERS CONSIDERED

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard.

REASONS AND CONSIDERATIONS

In relation to the requested alterations the Board considered these to be of a minor nature, by reason of their nature, extent and temporary duration in the context of the development as a whole, being a major industrial development.

The Board carried out a screening for appropriate assessment. It concluded that, on the basis of the information submitted, the proposed alterations, in themselves, or in combination, or in combination with other plans and projects, would not be likely to have significant effects on any European Sites.

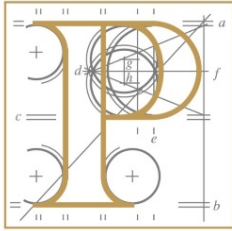
John Desmond

Senior Planning Inspector

17th June 2016



ATTACHMENT B.3.5:
PLANNING APPROVAL, JANUARY 2018



An
Bord
Pleanála

Board Order 29N.YM0004

Planning and Development Acts, 2000 to 2017

Planning Authority: Dublin City Council

(Associated reference numbers: 29N.YA0010 and 29N.YM0002)

REQUEST received by An Bord Pleanála on the 21st day of July, 2017 from Irish Water of Colvill House, 24 – 26 Talbot Street, Dublin under section 146B of the Planning and Development Act, 2000, as amended, in respect of a strategic infrastructure development described as the Ringsend Wastewater Treatment Works Extension at Pigeon House Road, Poolbeg Peninsula, Dublin.

WHEREAS the Board made a decision to approve, subject to conditions, the above-mentioned development by order dated the 16th day of November, 2012 under case reference number 29N.YA0010 and the development was the subject of a previous alteration, by order dated the 24th day of June, 2016, under case reference 29N.YM0002,

AND WHEREAS the proposed alteration is described as follows:

Omission of three construction site compounds previously approved under case reference number 29N.YA0010 and the provision of three new temporary construction site compounds at alternative locations as replacement facilities (referenced as Site C1, Site C2 and Site C3) as set out on drawing number Y15710/PL/001 Revision A lodged with the Board on the 21st day of July, 2017.

AND WHEREAS the Board decided, in accordance with section 146B(2)(a) of the Planning and Development Act 2000, as amended, that the proposed alteration would result in a material alteration to the terms of the development, the subject of the permission,

AND WHEREAS having regard to the nature of the issues involved, the Board decided, in accordance with section 146B(8) of the Planning and Development Act 2000, as amended, to require the applicant to invite submissions or observations in relation to the matter from members of the public,

AND WHEREAS having considered all of the submissions/observations and documents on file and the Inspectors' reports, the Board considered that the making of the proposed alteration would not be likely to have significant effects on the environment or on any European Site,

NOW THEREFORE in accordance with section 146B(3)(b) of the Planning and Development Act, 2000, as amended, the Board hereby alters the above-mentioned decision so that the approved development shall be carried out in accordance with the plans and particulars received by An Bord Pleanála on the 21st day of July, 2017.

MATTERS CONSIDERED

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.

REASONS AND CONSIDERATIONS

In coming to its decision, the Board had regard to the following:

- (a) the planning history of the overall development, including the scope and nature of the Ringsend Wastewater Treatment Works extension approved under 29N.YA0010,
- (b) the nature, scale and purpose of the proposed alteration,
- (c) the location of the proposed alterations and the pattern of development in the area, taking into consideration land use zoning considerations,
- (d) the temporary nature of the proposed construction compounds,
- (e) the documentation and submissions on file, including the submissions received in response to the Board's request in accordance with Section 146B(8) of the Planning and Development Act, 2000, as, amended, and
- (f) the reports of the Inspectors.

The Board was satisfied that the information before it was adequate to undertake a screening for appropriate assessment and a screening for environmental impact assessment in respect of the proposed alteration.

Appropriate Assessment Screening:

In conducting a screening exercise for appropriate assessment, the Board considered the nature, scale and location of the proposed alteration, the documentation and submissions on file, including the Appropriate Assessment screening report submitted in support of the proposed alteration and the assessment of the Inspectors in relation to the potential for effects on European Sites. In undertaking the screening exercise, the Board accepted the analysis and conclusions of the Inspectors. The Board concluded that, by itself and in combination with other development in the vicinity, the proposed alteration would not be likely to have significant effects on any European Site in view of their conservation objectives.

Environmental Impact Assessment Screening:

Under case reference number 29N.YA0010 approval was granted for the Ringsend Wastewater Treatment Plant extension, entailing a significant construction project. The proposed alteration seeks to omit three number construction compounds as approved and provide three number construction compounds at alternative locations as replacement facilities. The Board considered the potential environmental impacts that might arise due to the proposed alteration, both by itself and in cumulation with other development in the vicinity.

Having regard to the characteristics of the receiving environment, the planning history of the site, the characteristics of the proposed alteration and the submissions on file, the Board is satisfied that the proposed alteration would not be likely to have significant effects on the environment. The Board concurred with the analysis and conclusions of the Inspectors in this matter. The Board, therefore, concluded that the preparation of an environmental impact statement is not required, either by means of any mandatory requirement or following sub-threshold analysis.

Conclusions on the Proper Planning and Sustainable Development of the Area:

It is considered that the proposed alteration:

- would not have a significant effect on the landscape or upon the archaeological or cultural heritage or the architectural heritage of the area,
- would not adversely affect the character or setting of any protected structures,
- would not give rise to any significant impact on the natural heritage of the area,
- would be acceptable in terms of traffic safety and convenience,
- would not conflict with achievement of long term planning objectives for the area as set out in the Development Plan for the area, and
- would facilitate the delivery of a necessary capacity upgrade to a critical piece of public infrastructure serving Dublin.

The Board concluded that making the proposed alteration would be in accordance with the proper planning and sustainable development of the area.

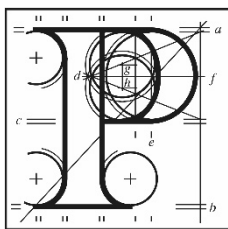
**Member of An Bord Pleanála
duly authorised to authenticate
the seal of the Board.**

Dated this day of 2018.



ATTACHMENT B.3.6:

**INSPECTOR'S REPORTS, AUGUST 2017 &
NOVEMBER 2017**



An
Bord
Pleanála

Inspector's Report PL29N.YM0004

Development

Approval sought to alter the terms of Application previously approved under Reg. Ref. 29N.YA0010 pursuant to Section 146B of the Planning and Development Act, 2000. The proposed alterations sought involve the omission of 3 construction site compounds previously approved under 29NJ.YA0010 and the provision of 3 new temporary construction site compounds at alternative locations as replacement facilities.

Planning Authority

Dublin City Council.

Type of Application

Request to amend the terms of an approved development under S.146B(1) of the Planning and Development Act, 2000 (as amended).

Applicant

Irish Water.

Date of Site Inspection

9th August 2017

Inspector

Paul Caprani.

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1.0 Introduction

An application has been lodged by Irish Water seeking that the Board exercise its powers under the provisions of Section 146B of the Planning and Development Act to alter the terms of approval for the development of the Ringsend Wastewater Treatment Plant Extension granted by An Bord Pleanála under Reg. Ref. 29N.YA0010. The alterations specifically relate to the relocation of the construction compound to facilitate the carrying out of the major works proposed within the Ringsend Wastewater Treatment Plan under the extant approval.

2.0 Legislative Provisions

Section 146B(1) of the Planning and Development Act 2000, as amended, provides that a person who is intending to carry out a strategic infrastructure development may request the Board to alter the terms of the subject approved development.

Section 146B(2) requires the Board to decide (under 146B(3)) whether or not the making of the said proposed alteration would constitute the making of a material alteration of the terms of the development concerned. The Board may invite submissions prior to making this decision (146B(2)(b)). If it decides under 146B(3)(a) that it would not be a material alteration, then it must alter the approval accordingly. If it determines under 146B(3)(b) that it would constitute a material alteration of the terms of the development, before making that determination the Board must first determine, under 146B(4) whether the requested alteration, or any alteration the Board may be considering under 3(b)(ii), would be likely to have significant effects on the environment. Under 143B(3)(b) the Board shall determine whether to (i) make the alteration, (ii) make a different alteration (not being one that would represent a more significant change to the terms of the development) or (iii) refuse to make the alteration. Public consultation procedures under 146B(8) apply in the case of 146B(3)(b) and 146B(4).

Where it is determined under 146B(4)(i) or (ii) that significant effects on the environment *are not likely*, the Board shall alter the approval accordingly. Where it is determined under 146B(4)(i) or (ii) that significant effects on the environment *are*

likely the provisions of 146C apply and the Board shall require the requester to prepare an EIS and to publish notices regarding statutory public consultation, after which period that Board may determine the matter under section 146B(3)(b) having regard to various matters set out in section 146C(6).

3.0 Planning History

3.1. Planning approval was granted by the Board on 5th November, 2012 for the following:

- Expansion of the firm capacity of the wastewater treatment plant at Ringsend from 1.69 million PE to 2.1 million PE with an overall installed capacity of 2.4 million PE.
- The relocation of the existing outfall serving the WWTP to a point 9 kilometres into the Irish Sea. The outfall currently discharges into the River Liffey adjacent to the ESB station at Poolbeg.
- The development of a green area within the wastewater treatment plant comprising of 0.8 hectares of land for the development of additional secondary treatment to cater for an additional 400,000 PE.
- Various ancillary and sundry works associated with the upgrading including the provision of 6 temporary construction compounds to be used for the storage of construction plant, parking and facilitate the general delivery of the upgrading works. The location of the original compound area is granted are indicated in Figure 3.4 of the Project Report submitted with the current Section 146B application.

The conditions attached to the original grant of planning permission and approval which are pertinent to the current Section 146B application are Condition No. 5 and Condition No. 13 and these are set out in full below.

Condition no.5 – *A construction stage environmental management plan (CSEMP), including all construction method statements, shall be prepared by the developer and implemented by the contractor. The developer shall retain responsibility for overseeing, updating and enforcing the construction environmental management*

plan. The construction environmental management plan shall adhere to the following requirements:

- (a) All preventative and management measures to be applied throughout the construction phase shall be set out so that all potential impacts are minimised, mitigated, or avoided.*
- (b) All measures to be employed in relation to spill contingencies, spoil disposal, management of contaminated soil, the selection of slurry additives and drilling fluids.*
- (c) Measures set out in the Construction Industry Research and Information Association (CIRIA) on the control and management of water pollution from construction sites shall be adhered to.*
- (d) All fuels or chemicals kept on the construction site shall be stored in bunded containers. All refuelling and maintenance of vehicles and equipment shall be carried out in designated containment areas away from sensitive environments.*
- (e) Any waste or hazardous waste residuals or potentially contaminated sludge from spill clean-up shall be stored in appropriate receptacles or containers, or in bunded storage areas prior to their removal by the developer or EPA licenced contractor.*
- (f) Any discharges arising from the construction phase shall incorporate silt removal and hydrocarbon removal using a hydrocarbon interceptor.*
- (g) Weekly monitoring of the water quality being discharged off the site shall take place during the construction phase.*
- (h) Foul sewage shall be transported off site and disposed of by discharging to a licenced sewer network.*
- (i) All marine vessel waste generated during the pipeline survey, and any maintenance vessels including marine rigs, shall accord with relevant guidelines including those guidelines from Annex V of the International Convention for the Prevention of Pollution from Ships, as amended. All hazardous waste stored on ships shall be contained in sealed labelled containers and stored in lockable container cabinets. A record of all types and quantities of waste arising on each vessel shall be kept.*

- (j) The Guidelines entitled 'Requirements for the Protection of Fisheries Habitats during Construction and Development Works at River Sites' prepared by the Eastern Regional Fisheries Board shall be adhered to in full.*
- (k) Management proposals and monitoring protocols for areas of ecology, archaeology, water quality management (both ground and surface), dust management, noise management, traffic management, sediment control, spoil disposal, general pollution control, community liaison, hazardous substance management, environmental training and supervision for personnel.*
- (l) Details of the management of all landscaping within the sites and, where appropriate, in the vicinity of the site.*
- (m) Details of site managers, contact numbers (including out of hours) and public information signs (including warning signs) at the entrance and, where appropriate, at the boundaries of the site.*
- (n) Details of a pest control plan;*
- (o) Staff parking shall not be permitted in the public car park in the vicinity of the site and suitable car parking places shall be provided elsewhere.*

Upon the commencement of construction, the CSEMP will be reviewed according to a regular timeframe and will be updated if necessary. Environmental auditing will be undertaken to ensure compliance with the CSEMP.

Condition no.13 – *A clearly demarcated pedestrian crossing on Pigeon House Road to the east of the wastewater treatment plant, together with the construction of a railing along the footpath on the northern side of the Pigeon House Road and a slip form kerb barrier, shall be provided along the southern side of Pigeon House Road and shall be constructed prior to the commencement of development. Access arrangements for pedestrians shall be monitored on a weekly basis throughout the construction period. Where it is decided that pedestrian access arrangements to South Bull Wall and surrounding amenity area are adversely affected during the construction period, appropriate measures shall be incorporated to minimize any impact on pedestrian access arrangements.*

4.0 Other Relevant Planning Cases

4.1. PL29N.YM0002

Alterations and amendments to the permitted Ringsend Wastewater Treatment Plant were altered by the Board under Reg. Ref. PL29N.YM0002 under the provisions of Section 146B(1) in June, 2016. The alterations consisted of the following:

- Provision of a temporary construction access onto the Pigeon Road c.100 metres west of the main entrance to the Poolbeg Power Station.
- Temporary removal of two small areas of landscaping bunds located within the wastewater treatment plant along its eastern boundary.
- Construction of a temporary haul road c.80 metres long connecting the existing internal wastewater treatment plant roads along the southern and eastern boundaries of the site.

The Board determined that the requested alterations would be of a minor nature and would not be material in terms of the proper planning and sustainable development of the area. The decision was dated 24th day of June, 2016.

4.2. Current Relevant Planning Cases – PC0203

Pre-application consultations are currently on-going with Irish Water regarding a new application under the provisions of Section 37E to alter the parent permission granted under Reg. Ref. 29N.YA0010.

5.0 Request for Alteration under the Current Application (Reg. Ref. YM0004)

5.1. The alterations proposed under the current application relate to providing new compound areas for construction works associated with the wastewater treatment plant upgrade. The Project Report submitted with the application indicates that the current application arises from changes in circumstances resulting in the lack of availability of three of the construction and storage compounds granted under the parent permission in 2012.

5.2. The compounds which are no longer available to use are all located to the west of the Ringsend facility on the northern side of the Southbank Road. They comprise of

three separate land parcels along a 300m stretch on the northern side of the Southbank Road. They are currently undeveloped and comprise of land parcels of approximately 0.47 hectares, 0.106 hectares and 0.68 hectares in size.

- 5.3. It is also proposed to retain three of the compounds granted under the parent permission. These comprise of a site on the southern side of the Southbank Road adjacent to the Covanta Waste to Energy Facility (indicated on the drawings as Site H), a site on the western side of the Shellybanks Road (indicated on the drawings as Site G) and a site at the end of the Poolbeg Peninsula which was originally to accommodate the launch area for the 9 kilometre tunnel.
- 5.4. The alterations and amendments sought under the current application relate to three new sites which are briefly described below.

Site C1

Site C1 is the largest of the proposed new compounds and is located directly to the south of the Covanta Waste to Energy Plant. The site is 3.01 hectares in size and is currently used as a construction compound for the Covanta facility. It accommodates a car park, storage area, temporary site offices in the form of portacabins. Access from the compound to the wastewater treatment plant will be from the Southbank Road and the Shellybanks Road.

Site C2

Site C2 is located on lands to the immediate north of the wastewater treatment plant and comprises of a 0.75-hectare site, 0.64 hectares of which is in the ownership of the applicant. The site is currently unused and is bounded to the north by the storm overflow tanks for the Ringsend Wastewater Treatment System and to the south by the north wall of the Pigeon House Fort. It is accessed from the Pigeon House Road. A new temporary access to the site will be created for HGV movements as the existing access forms part of the Pigeon House Fort wall which is a protected structure. This compound will be used for the storage of material and plant throughout the construction period. A palisade fence will be installed along the northern boundary of the site so as to fence the site off from the adjacent storm overflow tanks.

Site C3

Site C3 is the smallest of the three sites proposed at 0.73 hectares and is located to the north-east of the subject site adjacent to the north-west boundary of the ESB Poolbeg Power Station. This land is under the ownership of Dublin City Council. It is bounded by the power station to the west and the ESB facility to the east. Concrete traffic barriers will be utilised on the western boundary for the protection of the Pigeon House Power Plant.

6.0 Application Submitted to the Board

Irish Water submitted a request for alterations under the provisions of S146B(1) on 21st July, 2017. The application was accompanied by a covering letter, a Project Report and associated drawings. Both the covering letter and the project report set out the background to the alterations sought. The project report also sets out:

- The project background,
- The alterations requested under the current application,
- The policy planning framework with specific reference to the policies contained in the Dublin City Development Plan and the local Framework Plan including the draft Poolbeg West SDZ.
- An AA screening exercise was also submitted with the planning report. It concludes that the alterations sought under the current application will not have a significant impact on any designated European sites in the vicinity.
- The project report goes on to assess the alterations sought in the context as to whether or not they constitute material changes to the parent scheme. It includes the following:
 - The changes are consistent with planning policy in terms of the objectives set out in the Development Plan and the Poolbeg West SDZ Planning Scheme.
 - The proposal will not have any direct impact on traffic volumes and will have a negligible impact on trip distribution and trip assignment in the general area.

- The alterations sought will not have any significant effects on the environment or Natura 2000 sites in the vicinity.
- Mitigation measures will be put in place to ensure that there is no impact on protected structures in the vicinity.
- The alterations will be exclusively for temporary works during the construction period and the works are located exclusively within the lands over which landowner consent has been granted.

Based on the above, the applicant concludes that the proposed alterations

- Are not material.
- Are not likely to have a significant effect on the environment.
- Are not likely to have a significant effect on any designated European site either alone or in combination with other projects in the vicinity.

7.0 Assessment

7.1. The Materiality of the Requested Alterations

The main considerations as to whether the requested alterations can be considered material or not are as follows:

- The extent of which the nature and extent of the amendments proposed could or would alter the overall nature and extent of the parent permission under 29N.YA0010.
- The extent to which the amendments proposed under this application were significant issues in the assessment of the parent development granted by the Board.
- The principle impact arising from the amendments proposed and whether or not such impacts could be deemed to be material in nature.

In relation to the first question, I do not consider that the altering of the development to incorporate additional construction compounds will in any way impact to a material extent on the overall nature and extent of the proposed development. The parent permission comprises of a major industrial/infrastructural development involving the

largescale expansion of the capacity of the largest wastewater treatment plant in the country. Altering the location of the construction compounds, all of which are located outside the confines of the main site, do not result in any alteration in the scheme's ability to treat and dispose of wastewater. The construction compounds do not represent a kernel element of the works to be undertaken on site. The compounds in this instance merely provide ancillary and support space for the parking and storage of plant and equipment and for possible ancillary office/canteen accommodation etc. The compounds will only operate for a temporary period and will cease to operate when works are completed. The relocation of the construction compounds will not in any way result in the alteration of the proposed works to upgrade the wastewater treatment plant. For the above reasons it can be reasonably argued that the amendments would not alter the nature and extent of the development granted approval under the parent permission 29N.YA0010.

In relation to the second issue, I have inspected the parent file and in particular the submissions and the report of the reporting inspector in relation to the application. I am satisfied that, having read the submissions on file and the assessment contained in the planning inspector's report, that issues relating to the location of the construction compounds did not feature at all as contentious or controversial issues during the course of deliberating on the application. This implies that the issue of the location or operation of the construction compounds were not a material issue or a material consideration in determining the original application.

Furthermore, it is apparent from the conditions attached to the permission (specifically Condition No. 5 and Condition No. 13), that approving the alterations sought will not in any way contravene or contradict the requirements of the conditions attached to the parent permission. Therefore, under this particular criteria, I can likewise conclude that the alterations sought cannot be considered material.

With regard to the final question posed in this assessment, whether potential planning impacts which could arise as a result of the alterations sought, these potential impacts are discussed in more detail below.

In terms of contravening the development plan, it is clear from numerous policy statements contained in the development plan that the upgrading of the Ringsend Wastewater Treatment Plant contributes to many of the goals set out in the Plan

which seek to improve water and wastewater services delivery in the city. Allowing alterations and amendments which would support the upgrading and extension to the Ringsend Wastewater Treatment system would in my view be fully in accordance with such policy statements.

The location of the three new compounds are covered by three separation zoning objectives namely:

- Z7 – to provide for the protection and creation of industrial uses and to facilitate opportunities for employment creation.
- Z14 – to seek the social, economic and physical development and rejuvenation of an area with mixed use of which residential and Zone 6 would be the predominant uses.
- Z9 – to preserve, provide and improve recreational amenity and open space and green networks.

Under Zoning Objective Z7, I note that ‘public service installation’, ‘storage depot’ and ‘support office ancillary to primary use’ are all permissible uses under this zoning objective.

I note that under Zoning Objective Z9, the ‘public service installation which would not be detrimental to the amenity of Z9 zoned lands’ would also be deemed to be a permissible use. I consider in this instance that the public service installation which would be of a temporary nature would therefore be acceptable. It should be noted that only a small part of compound C1 is governed by the Z9 zoning designation. The photographs attached also indicate that the lands that form part of the C1 compound which are governed by the Z9 zoning do not currently form part of the grassland area associated with the Irishtown Nature Reserve.

The remainder of C1 is designated as Zone Z14 which relates to strategic development in regeneration areas. Again ‘public service installations’ are a permissible use under this zoning objective.

In conclusion therefore I consider the proposed uses are in accordance with the zoning provisions contained in the development plan. While two of the compounds Compound C1 and Compound C2 incorporate areas of lands which are governed by the Zoning Objective Z9, to preserve, provide and improve recreational amenity and

open space, I note that public service installations are permitted where they are not deemed to be detrimental to the amenity of the Z9 zoned lands. The temporary nature of the compounds in this instance would in my view not result in a land use which would be detrimental to the amenity of the lands in the longer term and therefore can be deemed a permissible use in my opinion.

Part of the proposed compound C1 is also located within the draft Poolbeg West SDZ. This SDZ is at a draft stage currently. Part of proposed compound C1 is located in an area predominantly designated as mixed use (B2). I would agree with the applicant's conclusion that the proposed temporary use of these lands as a construction compound would not conflict with the longer term provisions of the planning scheme when it is finally adopted.

It is noted that there are a large number of SEVESO sites both upper tier and lower tier in the Dublin Port area. As part of the consultations undertaken in relation to the parent permission, the HSA were notified of the planning application and a copy of the EIS was sent to the authority for comment. The HSA did not make any submission to the Board in respect of the application under YA0010. It can only be concluded therefore that the HSA had no concerns in respect of the parent application from a health and safety perspective in the context of SEVESO sites in the vicinity. If works to be undertaken as part of the parent permission did not raise any concerns from the HSA in terms of potential impacts on SEVESO sites, it is extremely unlikely that the alterations proposed under the current 146B application would give rise to any concerns whatsoever from a health and safety perspective having regard to the minor nature of the amendments sought.

Traffic is perhaps the most probable impact which could be of a material nature resulting from the alterations of the location of the compounds. It is clear however from the information submitted that the alterations sought will not result in any change to the overall traffic volumes associated with construction traffic. In terms of access arrangements, it is proposed to utilise existing entrances to access compounds C1 and C3 both of which are located in close proximity to the wastewater treatment plant and therefore will not give rise to any excessive trip generation along the roads in the vicinity. It is further noted from my site inspection that the roads in question are relatively wide and capable of accommodating

increased volumes of traffic having regard to the modest levels of existing traffic volumes on the road network in the Poolbeg Peninsula.

With regard to the proposed new entrance to Compound 2 this entrance is proposed so as to ensure that the integrity of the protected structure at Pigeon House Fort is protected and maintained. The principle of DMURS has been included in the design of the new junction at Compound 2. The design provides for forward visibility of 49 metres which is in accordance with Table 4.2 of DMURS.

Finally, I consider that the alterations proposed may have the potential to impact on the architectural heritage of the area and in particular the two designated protected structures in the vicinity of Compound 2 namely Pigeon House Fort (RPS 6794) and Pigeon House Power Station (RPS 6796). The north wall of Pigeon House Fort lies adjacent to the southern boundary for Compound 2. It is proposed that a contractor will implement mitigation measures (set out in Appendix 4 of the project report) to protect the remnants of the north wall and power plant from vehicles and machinery using Compound C2. These measures will include utilising concrete traffic barriers during construction to prevent any impacts on the protected structure from internal movements within the compound.

Similarly, in the case of Compound 3 which is located in a paved area immediately east of the old Pigeon House Power Station which is also a protected structure, concrete traffic barriers will be placed during construction in order to prevent any impacts.

Arising from my assessment above I consider that there will be no impacts of a material nature arising from the proposed amendments and therefore having regard to:

- The nature and extent of the development approved under application 29N.YA0010.
- The extent and character of the alterations requested which is a temporary duration for the purposes of the construction of the approved development.
- The absence of any material planning impacts specifically in relation to traffic and road safety and impact on architectural heritage, it is considered that the alterations requested would not constitute the making of a material alteration in

terms of the development concerned within the meaning of Section 146B(2)(a) of the Planning and Development Act, 2000, as amended. The Board should therefore make its decision in accordance with Sections 146B(3)(a) that there be no requirement for the Board to consider the significance of environmental effects.

8.0 **Appropriate Assessment**

- 8.1. In making the current application seeking amendments and alterations to the Board the applicant has included an appropriate assessment screening report (see Appendix 3 of project report).
- 8.2. The Stage 1 AA Screening Report considered 19 European sites within a 15 kilometre radius of the subject site. Having regard to the qualifying interest of the European sites, the Stage 1 Screening Assessment concluded that without any scientific doubt, the proposed works would not have a significant negative effect (direct or indirect) on their own or taken in combination with other plans and projects on the Natura 2000 network in the vicinity. The screening assessment is set out in Table 3 of the screening report. It is concluded therefore on the basis of the findings of the screening for appropriate assessment a Stage 2 Appropriate Assessment is not required.
- 8.3. In carrying out my own Appropriate Assessment Screening, I would agree that due to the minor nature of the amendments proposed and the minor nature of the works to be undertaken as part of these alterations, it is reasonable to screen out the vast majority of the Natura 2000 sites within a 15 kilometre radius. There are however two sites which are of close proximity whereby the works to be undertaken as part of the alterations proposed could potentially have a significant effect on a European site. These sites are the South Dublin Bay SAC (Site Code: 000210). The single qualifying habitats are mudflats and sandflats not covered by sea water at low tide.
- 8.4. The other Natura 2000 site is the South Dublin Bay and River Tolka Estuary SPA (Site Code: 004024). There are 14 species of special interest including the Light Bellied Brent Goose, the Oyster Catcher, the Ringed Plover, the Grey Plover, the Knot, the Sanderling, the Dunlin, the Bar Tailed Godwit, the Redshank, the Black

Headed Gull, the Roseate Tern, the Common Tern, the Artic Tern and wetland species.

- 8.5. The conservation objectives in relation to both European sites are to maintain the favourable conservation status of the habitats and species referred to above.
- 8.6. It is considered that the alterations sought under the current application is likely to have no significant direct effect on the conservation objectives of either aforementioned European site having regard to the nature of the activities to be undertaken which is essentially the use of the sites for the temporary storage and parking of plant and equipment. It is not proposed to carry out any construction activity and the sites in question are for the most part brownfield sites on manmade ground with artificial surfaces which in the case of Compounds C1 and C3 are currently used for storage and parking.
- 8.7. The proposal involves a continuation of the use of lands for storage in the case of Compound C1 and the change of use of vacant or derelict lands to use as a temporary storage compound in the case of Compounds C2 and C3. It is therefore reasonable to conclude that any impact on European sites in the vicinity would be negligible. It is therefore not anticipated that the requested alterations would have a significant effect on Natura 2000 sites in the vicinity.
- 8.8. It is therefore reasonable to conclude on the basis of the information contained on file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on European Site No. 00210 (South Dublin Bay SAC) or would be likely to have a significant effect on European Site Nos. 004024 (South Dublin Bay and River Tolka Estuary SPA) or any other European Site in view of the site's conservation objectives and therefore a Stage 2 Appropriate Assessment (and submission of an NIS) is not therefore required.

9.0 Conclusions and Recommendation

Arising from my assessment above, I recommend that the Board make a determination in respect of the alterations sought under Section 146B(3)(a) of the Planning and Development Act, 2000, as amended that the making of the alterations

to which this request relates would not constitute a material alteration to the terms of the development concerned on the basis of the draft order set out below.

WHEREAS the Board issued a decision to approve subject to conditions the development under Reg. Ref. 29N.YA0010 by order dated 5th day of November, 2012.

AND WHEREAS the Board has received a request to alter the terms of the development the subject of the approval.

AND WHEREAS having regard to the nature of the issues involved, the Board decided in accordance with Section 146B(2)(b) of the Planning and Development Act, 2000, as amended, not to invite submissions or observations in relation to the matter from persons who had made submissions and observations in relation to the application the subject of this alteration.

AND WHEREAS the Board decided in accordance with Section 146B(2)(a) of the Planning and Development Act, 2000, as amended, that the proposed alterations would not result in any material alteration to the terms of the development, the subject of permission.

AND WHEREAS having considered all documents on file and the Inspector's Report, the Board considered that the making of the proposed alterations would not be likely to have significant effects on the environment or in any European site.

NOW THEREFORE in accordance with Section 146B(3)(b) of the Planning and Development Act, 2000, as amended, the Board hereby alters the above mentioned decision so that the approved development shall be carried out in accordance with the plans and particulars lodged with An Bord Pleanála on the 21st day of July, 2017.

10.0 Matters Considered

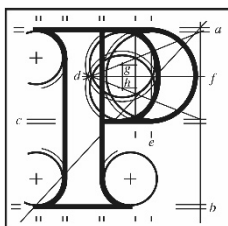
In making its decision the Board has regard to those matters to which by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions or observations received by it in accordance with statutory provisions.

11.0 Reasons and Considerations

Having regard to the nature, scale and location of the proposed development, the documentation submitted with the request and the report of the Inspector, the Board considered that the requested alterations would be of a minor nature, by reason of the nature, extent and temporary duration in the context of the development as a whole being a major industrial development. The proposed alterations would therefore not be material in terms of the proper planning and sustainable development of the area.

Paul Caprani,
Senior Planning Inspector.

9th August, 2017.



An
Bord
Pleanála

Inspector's Report 29N.YM0004

Further Report following public notification and consultation on the Proposed Alteration in accordance with Section 146B(8) of the Planning and Development Act, 2000, as amended.

Development

Approval sought to alter the terms of application previously approved under reg. ref. 29N.YA0010 pursuant to Section 146B of the Planning and Development Act, 2000, as amended. The proposed alterations sought involve the omission of 3 construction site compounds previously approved under 29N.YA0010 and provision of 3 new temporary construction site compounds at alternative locations as replacement facilities.

Location

Ringsend Wastewater Treatment Works, Poolbeg, Dublin 4

Planning Authority

Dublin City Council

Applicant

Irish Water

Inspector

Pauline Fitzpatrick

Date of Site Inspection

15/11/17

1.0 Introduction

- 1.1. This report relates to a request from Irish Water that the Board exercise its powers under section 146B of the Planning and Development Act 2000, as amended, to alter the terms of the application previously approved under reg. ref. 29N.YA0010 in relation to the Ringsend Wastewater Treatment Works extension.
- 1.2. The proposed alterations sought involve the omission of 3 construction site compounds previously approved under 29N.YA0010 and provision of 3 new temporary construction site compounds at alternative locations as replacement facilities.
- 1.3. On foot of an Inspector's report dated 9th August 2017 the Board informed the applicant in a letter dated 8th September 2017 that the proposed alterations would constitute a material alteration to the terms of the development. It invoked the provisions of section 146B(8) of the Act requiring the applicant to give public notice of the amendment and invite submissions from the public and certain prescribed bodies. The Board in its Direction had regard to:
 - The location of the proposed construction compounds which may generate a different set of interactions between works traffic and other road users (including the general public) in the vicinity of the existing wastewater treatment plant, including Pigeon House Road;
 - The scale of the proposed construction compounds;
 - The proximity of the proposed construction compounds to protected structures and interaction with these;
 - The potential visual impacts associated with the compounds including fencing and protective barriers;
 - The land-use zoning context of the sites concerned; and
 - The overall pattern of development in the area including interaction with other industrial projects.
- 1.4. The Board also invited the applicant to indicate the likely duration of the construction period.

- 1.5. Submissions have been received by the Board following the application of the said provisions.
- 1.6. This report will consider whether the proposed alterations would be likely to have significant effects on the environment as required pursuant to Section 146B(4) of the Act and make a recommendation to the Board on the matter. It will further make a recommendation to the Board as to whether the alteration should be made or not having regard to the provisions of Section 146B(3)(b).
- 1.7. I recommend that this report be read in conjunction with the Inspector's report referenced above which contains an overview of the location and description of the sites, details of the application made to the Board and the amendments sought, the policy planning framework, the planning history and the legislative context.

2.0 Submissions to An Bord Pleanala

2.1 Applicant

The likely duration of the construction period is three years.

2.2 Prescribed Bodies

The submission from the Department of Culture, Heritage and the Gaeltacht can be summarised as follows:

- Compound C1 is adjacent to a field within the SPA used by Brent Geese for feeding. It is referred to as the 'goose compensation field'. It was a mitigation measure for loss of feeding for Brent Geese in a previous extension to the Poolbeg waste water treatment plant. This issue has not been discussed in the AA – Screening.
- As part of the Covanta development monitoring of Brent Geese in the goose compensation field is taking place and is to continue for another 3 years. This monitoring should be extended in the same format when Covanta ceases monitoring. Such monitoring should continue for 3 years after construction ceases.

- Condition 12 attached to the permission for the Poolbeg WWTP extension under ref. 29N.YA0010 required detailed monitoring of birds for six years from the date of the grant of approval. Should the alteration be approved a condition should be attached requiring the extension of the monitoring for six years from the date of the decision.

2.3. Observers

A submission has been received from Sandymount and Merrion Residents Association on 09/10/17 with additional photographs received 17/10/17. The submission can be summarised as follows:

Compound 1

- There are serious reservations regarding the use of any part of compound C1 which was used during the construction of the waste to energy facility.
- A larger area than that which secured permission has been used.
- There appear to be permanent changes including tarmacadam and palisade fencing which alter the use and access to these lands in contravention of the temporary use and methods of habitat protection proposals which were part of the application and permission.
- If a temporary permission and site restoration commitment is to have any real meaning, then the site should be reinstated to the condition which prevailed immediately prior to the construction of the waste to energy facility. Another temporary use would undermine same.
- The area has been an essential ancillary habitat for several protected species from the adjoining designated SPA and SAC. It has also been the habitat of various species of flora and fauna.

Compounds 2 and 3

- The proposals to protect archaeology are noted. Provided an archaeologist oversees the protection of the sites the association trusts that there will be no adverse impacts.

3.0 Assessment

I consider that the issues arising can be assessed under the following headings:

- Whether the proposed alterations would be likely to have significant effects on the environment.
- Appropriate Assessment - Screening
- Other Issues

3.1. Whether the proposed alterations would be likely to have significant effects on the environment

- 3.1.1. At the outset I note that the parent approval under reg. ref. YA0010 was accompanied by an EIS. The EIS assessed the impact of the proposed development on the environment. The assessment not only included the WWTP extension but also the construction of 6 no. construction compounds. An EIA was undertaken by the Board which concluded that subject to the mitigation measures set out in the EIS, as amended, and the conditions attached, the proposed development would not adversely impact on the environment.
- 3.1.2. In relation to the thresholds that trigger the need for an EIS I have had regard to Schedule 5 Development for the Purposes of Part 10, Parts 1 and 2. I am of the opinion that the works proposed pursuant to the alteration sought do not fall within any of the developments listed in same.
- 3.1.3. In assessing whether the proposed alterations would be likely to have significant effects on the environment Section 146B(7) requires that regard is had to the criteria for determining whether a development would or would not be likely to have significant effects on the environment as set out in Schedule 7 of the Planning and Development Regulations, 2001 as amended, as set out below.

3.2. Characteristics of the Proposed Development

- 3.2.1. In the context of what was sought and granted under YA0010 I do not consider the proposed omission of three of the previously identified compounds and their replacement with three alternative locations in the immediate vicinity of the WWTP

when assessed against the relevant criteria under this heading to be significant. The three sites to be omitted are all located to the west of the WWTP on the northern side of the Southbank Road and equate to 1.256 hectares. The said sites are no longer available due to the operational requirements of the owners (ESB). The three alternative locations to the south-west and north of the WWTP equate to 4.49 hectares. Whilst larger in area I submit that it is not significant in context, within an industrial environment, and would not give rise to cumulative impacts as to warrant EIA. The compounds are temporary in nature serving the construction phase of the approved development, only, which is envisaged to be 3 years in duration.

- 3.2.2. Compound C1 corresponds with an existing construction compound used for the construction of the waste to energy facility and already accommodates a car park, storage area and temporary site offices in the form of portacabins. It is accessed from both South Bank Road and Shellybanks Road. The continued use of this facility for the WWTP construction works will entail a new palisade fence and screening to be installed. Compound C2 accessed immediately to the north of the WWTP from Pigeon House Road will require a new temporary access with hard surface and palisade fence to separate it from the adjacent storm water tanks associated with the WWTP. Concrete barriers are also proposed along the boundary abutting Pigeon House Fort protected structure to the south. Compound C3 will require minimal intervention save for concrete barriers to be erected alongside the Pigeon House Power Station protected structure immediately to the west.
- 3.2.3. I submit that the interventions in themselves are minor. I would not envisage any additional use of natural resources, production of waste, pollution and nuisances and risk of accidents over the original construction compounds subject to assessment.
- 3.2.4. The alterations sought will not result in any change on the overall traffic volumes associated with construction traffic but will result in changes in the routes a portion of the said traffic will follow in the immediate vicinity of the WWTP. Compound C1 is accessed from both the South Bank Road and Shellybanks Road with compounds C2 and C3 accessed from Pigeon House Road. Originally 5 out of the 6 compounds would have been accessed from the South Bank Road with the 6th accessed from Pigeon House Road. As noted on day of inspection both South Bank Road and Pigeon House Road are relatively wide with vehicular movements

noted to be light. I consider that they are capable of accommodating the volumes of traffic arising.

- 3.2.5. I would concur with the applicant's view that any impacts as a result in the changes will be localised to the peninsula and that the operation of any junctions in the wider network will not experience any impacts. As noted above the construction period for which the compounds are required is for a defined period in the region of three years, only.

3.3. Location of Proposed Development

- 3.3.1. I submit that the proposed alternative locations would have no significant impact in terms of the sensitivity of area taking into consideration the existing industrial land uses that prevail in the vicinity.
- 3.3.2. In terms of visual impact, the compounds are located within the said industrial environment and will have no discernible impact. Views of compound C1 from the south at Sandymount are screened by existing mounds.
- 3.3.3. As noted by the Inspector in the 1st report, there is no identifiable conflict with the local planning policies for the area as set out in the Dublin City Development Plan. I would concur with his assessment in terms of the acceptability of the proposed temporary facilities within the three zoning objectives Z7, Z9 and Z14. Due cognisance is also had to the Poolbeg West SDZ which was made by the Council on the 02/10/17 and which is now with the Board for decision (ZD2017). Again I would concur with the Inspector's conclusion that whilst part of compound C1 is located in an area designated as mixed use (B2), its temporary use as a construction compound would not conflict with the longer term provisions of the planning scheme should it be adopted.
- 3.3.4. None of the sites are within Natura 2000 sites with Compound C1 immediately to the west of South Dublin Bay SAC and South Dublin Bay and River Tolka Estuary SPA. I propose to address this matter further in section 3.5 below. With the application of best environmental practices during the construction period it is my opinion that potential effects on the conservation objectives of the designated sites would be unlikely to arise.

- 3.3.5. In terms of cultural heritage compound C2 adjoins Pigeon House Fort (RPS 6794) with the north wall of the Fort adjacent to the southern boundary of the compound. As per Appendix 4 of the project report mitigation measures will include the protection of the remnants of the wall and power plant from vehicles and machinery using the compound by concrete traffic barriers.
- 3.3.6. Similarly concrete barriers are to be used along the west boundary of compound C3 to the Pigeon House Power Station (RPS 6796) protected structure, again as measure to protect against any impact from vehicles and machinery.
- 3.3.7. In view of the existing context and setting of the protected structures and the temporary nature of the proposed compounds I consider the mitigation measures to prevent impacts from vehicles and machinery to be adequate and that the impact on same would not be material.
- 3.3.8. As noted in the archaeologist's assessment provided in Appendix 4 of the Project Report works within compound C2 in proximity to Pigeon House Fort should be monitored by a suitably qualified archaeologist. He also notes that where works are taking place in made ground in compound areas C1 and C2 and do not penetrate to a depth greater than 5 metres no archaeological monitoring will be required. Notwithstanding I note that condition 14(b) of the approval granted under YM0010 requires the applicant to employ a suitably qualified archaeologist who shall monitor site investigations and other excavation works. I therefore accept that there would be no significant effects on cultural heritage.

3.4. Characteristics of Potential Impacts

- 3.4.1. From the assessment above, it is my opinion that the extent of the impact in terms of geographical area impacted is very limited. The development is within an industrial landscape and in the context of the existing development will not have any visual impact.
- 3.4.2. The principal aspects of the environment that would potentially be impacted by the proposed development would be traffic and cultural heritage. Based on the assessment above it is my opinion that the overall magnitude of the main impacts as assessed under the above headings would be localised and minor.

3.4.3. A number of the potential effects identified above are considered to have a high degree of probability however the extent of impacts will not be significant and the overall magnitude is at worst likely to be low. The proposed alterations in terms of construction compounds will be both temporary and reversible.

3.5. **Appropriate Assessment Screening**

3.5.1. I note that the Board undertook an Appropriate Assessment in relation to the effects of the development proposed under YA0010. The Board concluded that the proposed development by itself, or in combination with other plans or projects would not be likely to adversely affect the integrity of European Sites in view of their conservations objectives.

3.5.2. An appropriate assessment screening report accompanies this request for amendments (Appendix 3 of the Project Report) which concludes that the proposed works would not have a significant effect on European sites either individually or in combination with other plans or projects. I also note the submission from the Department of Culture, Heritage and the Gaeltacht.

Relevant Natura 2000 Sites, Qualifying Interests and Conservation Objectives

3.5.3. There are 19 European Sites within an 15km radius of the subject site (see Figure 3.2 of the said report) with their qualifying interests set out in Table 1.0. In view of the separation distance, absence of any direct pathway and the qualifying interests I consider there is no potential for significant effects on 17 no.

3.5.4. There are two designated sites in proximity to the site, details of which are shown on Figure 3.3 of the AA- Screening Report. They are:

- South Dublin Bay SAC (site code 000210), the qualifying interests being mudflats and sandflats not covered by sea water at low tide, annual vegetation of drift lines, Salicornia and other annuals colonising mud and sand and embryonic shifting dunes.
- South Dublin Bay and River Tolka Estuary SPA (site code 004024), the qualifying interests being Light Bellied Brent Goose, Oyster Catcher, Ringed Plover, Grey Plover, Knot, Sanderling, Dunlin, Bar Tailed Godwit, Redshank,

Black Headed Gull, Roseate Tern, Common Tern, Artic Tern and wetland and water birds.

3.5.5. Detailed conservation objectives have been prepared for both sites the overall aim being to maintain or restore the favourable conservation status of habitats and species of community interest.

3.5.6. The SPA immediately adjoins the site to the east. As noted in the submission from the Department of Culture, Heritage and the Gaeltacht this section of the SPA is known as the 'goose compensation field' as it was a mitigation measure for loss of feeding for Brent Geese in a previous extension of the WWTP. In terms of the SAC there is a separation distance of approx. 90 metres to the nearest site – Compound C1 (north of designated site).

Assessment of likely effects

3.5.7. None of the construction compound sites are within the designated sites. Therefore no direct impacts would arise.

3.5.8. The amendments proposed entail provision of 3 no. construction compounds allowing for the temporary storage of parking of plant and equipment for a period of in the region of 3 years. It is not proposed to carry out any construction activity and the sites in question are, for the most, part brownfield sites on manmade ground with artificial surfaces within an established industrial area. The proposal involves the continuation of the use of lands for storage in the case of compound C1 with the change of use of vacant lands or derelict lands in the case of compounds C2 and C3. Conditions 5 and 11 of the approval under ref. YM0010 which address the construction phase and works undertaken within/adjacent to Natura 2000 sites will apply. It is therefore reasonable to conclude that any impact on European Sites in the vicinity would be negligible.

3.5.9. In the context of the nature of the alterations, namely omission of three construction compounds and their replacement with alternative facilities in close proximity, cumulative effects will not result. As noted above appropriate assessment has been undertaken by the Board on YA0010 which included the provision of 6 compounds.

Screening Statement and Conclusions

3.5.10. It is therefore reasonable to conclude on the basis of the information contained on file, which I consider adequate in order to issue a screening determination, that the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on European Site No. 00210 (South Dublin Bay SAC) or would be likely to have a significant effect on European Site No. 004024 (South Dublin Bay and River Tolka Estuary SPA) or any other European Site in view of the site's conservation objectives and therefore a Stage 2 Appropriate Assessment (and submission of an NIS) is not therefore required.

3.6. Other Issues

- 3.6.1. The Department of Culture, Heritage and the Gaeltacht in its submission to the Board requests that the monitoring of Brent Geese in the lands to the east of compound C1 known as the 'goose compensation field', required as part of the Covanta waste to energy development which is to continue for another three years, be extended in the same format, thereby it would continue for 3 years after construction on the WWTP extension is completed. I consider that this is outside the scope of the current alteration request. The requirements pertain to a separate development not covered by approval under YA0010.
- 3.6.2. Whilst the Department notes that the issue of the 'goose compensation field' was not discussed in the AA- Screening report I note that it forms part of the SPA to which regard is had in the said report and is clearly shown in Figure 3.3 therein.
- 3.6.3. The Department also recommends that the requirements of condition 12 attached to the permission for the Poolbeg WWTP under ref. 29N.YA0010 be extended for a further six years should the alteration be approved. The said condition covers monitoring of bird species and numbers together with their distribution within the Dublin Bay Area for a period of 6 years from the date of the order. The date of Board's decision was 16/11/12. As noted above the proposed alternations sought would not have significant effects on the environment with any impacts localised. As to how the relocation of the 3 of the 6 compounds subject of the approval would raise concerns to form the basis or justify such an amendment to condition 12 has not been provided.

3.6.4. The Sandymount and Merrion Residents association express concern that a further extension of the use of construction compound C1 would be at variance with the temporary nature of the use of the lands. Whilst I note that the lands in question have been used for a period to facilitate the construction of the waste to energy facility I consider that the extension of the use of the lands for such purposes for a further 3 years would not undermine its temporary nature. On completion of the WWTP works it would be required to be removed and reinstated. The fact that a hard surface has been laid with the area enclosed by palisade fencing does not alter the purpose and temporary nature of the activity.

4.0 Recommendation

With reference to the assessment above I consider it reasonable to conclude that the proposed alterations as requested would not be likely to have a significant effect on the receiving environment. I recommend that the Board make the alteration as sought pursuant to section 146B(3)(b) of the Planning and Development Act, 2000, amended in accordance with the draft order attached.

WHEREAS The Board issued a decision to approve subject to conditions the development under Reg. Ref. 29N.YA0010 by order dated 5th day of November, 2012.

AND WHEREAS the Board has received a request to alter the terms of the development the subject of the approval.

AND WHEREAS the proposed alteration is described as follows:

Omission of three construction compounds previously approved under Reg. Ref. 29N.YA0010 and the provision of three temporary construction site compounds at alternative locations as replacement facilities.

AND WHEREAS the Board considered that the alteration would result in a material alteration to the terms of the development, the subject of the permission,

AND WHEREAS having regard to the nature of the issues involved, the Board invoked the provisions of section 146B(8)(a) of the Planning and Development Act, 2000, as amended, to invite submissions or observations in relation to the matter from members of the public,

AND WHEREAS having considered all of the submissions/observations and documents on file and the Inspectors' reports, the Board considered that the making of the proposed alteration would not be likely to have significant effects on the environment or on any European Site,

NOW THEREFORE in accordance with section 146B(3)(b) of the Planning and Development Act, 2000, as amended, the Board hereby alters the abovementioned decision so that the permitted development shall be altered in accordance with the plans and particulars received by An Bord Pleanála on the 21st day of July, 2017.

MATTERS CONSIDERED

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included the submissions and observations received by it in accordance with statutory provisions.

REASONS AND CONSIDERATIONS

In coming to its decision, the Board had regard to the following:

- (a) the planning history of the overall development, including the scope and nature of the Ringsend Wastewater Treatment Works extension approved under 29N.YA0010.
- (b) the nature, scale and purpose of the proposed alteration,
- (c) the documentation and submissions on file, including the submissions received in response to the Board's request in accordance with Section 146B(8) of the Planning and Development Act, 2000, as, amended,
- (d) the reports of the Inspectors.

The Board was satisfied that the information before it was adequate to undertake a screening for appropriate assessment and a screening for environmental impact assessment in respect of the proposed alteration.

Appropriate Assessment Screening

In conducting a screening exercise for appropriate assessment, the Board considered the nature, scale and location of the proposed alteration, the documentation and submissions on file, including the Appropriate Assessment screening report submitted in support of the proposal and the assessment of the Inspector in relation to the potential for effects on European Sites. In undertaking the screening exercise, the Board accepted the analysis and conclusions of the Inspectors. The Board concluded that, by itself and in combination with other development in the vicinity, the alteration would not be likely to have significant effects on any European Site in view of their conservation objectives.

Environmental Impact Assessment Screening

Under file reference YA0010 approval was granted for the Ringsend Wastewater Treatment Plant extension, entailing a significant construction project. The proposed alteration seeks to omit 3 no. construction compounds as approved and provision of 3 no. construction compounds at alternative locations as replacement facilities. The Board considered the potential environmental impacts that might arise due to the proposed alteration, both by itself and in cumulation with other development in the vicinity.

Having regard to the characteristics of the receiving environment, the planning history of the site, the characteristics of the proposed alteration and the submissions on file, the Board is satisfied that the proposed alteration would not be likely to have significant effects on the environment. The Board concurred with the analysis and conclusions of the Inspector in this matter. The Board, therefore, concluded that the preparation of an environmental impact statement is not required, either by means of any mandatory requirement or following sub-threshold analysis.

Conclusions on Proper Planning and Sustainable Development

It is considered that the alteration:

- would not have a significant effect on the landscape or upon the archaeological or cultural heritage of the area,
- would not give rise to any significant impact on the natural heritage of the area, and
- would be acceptable in terms of traffic safety and convenience.

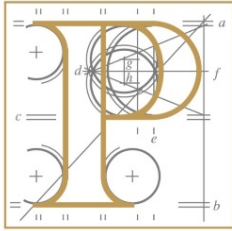
The Board concluded that making the proposed alteration would be in accordance with the proper planning and sustainable development of the area.

Pauline Fitzpatrick
Senior Planning Inspector

November 2017



**ATTACHMENT B.3.7:
PLANNING APPROVAL, APRIL 2019**



An
Bord
Pleanála

Board Order ABP-301798-18

Planning and Development Acts, 2000 to 2018

Planning Authorities: Dublin City Council and Fingal County Council

Application for permission under section 37E of the Planning and Development Act 2000, as amended, in accordance with plans and particulars, including an environmental impact assessment report and Natura Impact Statement, lodged with An Bord Pleanála on the 6th day of June, 2018 by Irish Water care of Stephen Little and Associates of 26/27 Pembroke, Dublin.

Proposed Development: 10-year permission for development comprising revisions and alterations to the existing and permitted development at the Ringsend Wastewater Treatment Plant and for a new Regional Biosolids Storage Facility, being two components of an integrated wastewater treatment facility. The proposed development comprises revisions and alterations to the 2012 Approval (case reference number 29N.YA0010). The proposed revisions and alterations will continue to facilitate the expansion of the existing wastewater treatment plant (Ringsend Wastewater Treatment Plant) to its permitted capacity of 2.4 million population equivalent within the confines of its current site. However, this will now be achieved primarily through the introduction of aerobic granular sludge (AGS) technology at the Ringsend Wastewater Treatment Plant. The introduction of this technology will facilitate the omission of the nine-kilometre Long Sea Outfall Tunnel and the continued use of the existing outfall.

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

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

- Reconfiguration and retrofitting of the existing Sequential Batch Reactor (SBR) Tanks, up to 24 number in total, to facilitate the use of a new AGS technology.
- Associated works, including the provision of:
 - A Sludge Pasteurisation Building (approximately circa 31.5 metres x circa 14.5 metres x circa 8.5 metres high).
 - A Phosphorous Recovery Building (approximately circa 38.5 metres x circa 15.5 metres x circa 20 metres high).
- Ancillary site development works (pipework and electrical works), plant (new and adjustments to existing) and landscape works (including boundary treatments) to accommodate the above development, including:
 - The use on a permanent basis of a vehicular entrance off Pigeon House Road and associated landscaping and internal road along the eastern boundary of the site, previously granted a temporary permission under case reference number 29N.YM0002.
 - A new underground electrical connection to an existing underground ESB cable, along the southern boundary of the site (at the south-west corner only) and at the edge of, and extending to within, the South Dublin Bay and River Tolka Estuary Special Protection Area.
 - Bypass culvert, ultraviolet (UV) lamps, internal road reconfigurations and additional car parking.
 - The continued use of two number temporary construction compounds (C1 and C2) for the 10-year duration of the permission sought. These compounds were previously permitted under case reference number 29N.YM0004 for a period of three years. Proposals for the temporary construction compound C1 include a pedestrian connection to the south-west corner of Ringsend Wastewater Treatment Plant. Temporary construction compound C1 is partially located within the Poolbeg West Strategic Development Zone as defined by Statutory

Instrument No. 279 of 2016. A Protected Structure (Pigeon House Fort) (RPS No. 6794) is partially located within temporary construction compound C2.

- The omission of the permitted nine-kilometre Long Sea Outfall (in tunnel) for the purposes of discharging into the Dublin Bay area from an onshore inlet shaft approximately 350 metres east of the existing Ringsend Wastewater Treatment Plant (including any associated construction works) which in turn provides for the continued use of the existing outfall to the River Liffey serving the Ringsend Wastewater Treatment Plant.
- The omission of two number temporary construction compounds located to the west of the Ringsend Wastewater Treatment Plant and also the omission of one temporary construction compound on Pigeon House Road to serve the Long Sea Outfall (in tunnel); all of which were previously permitted under case reference number 29N.YA0010.

The overall application site area of the development proposed at the Ringsend Wastewater Treatment Plant is approximately 17.9 hectares and includes a Protected Structure (RPS No. 6794). The overall existing Ringsend Wastewater Treatment Plant is 14.7 hectares and is divided into two sites by Pigeon House Road; 11.2 hectares to the south of the road where the Ringsend Wastewater Treatment Plant is located, with a further 3.5 hectares located to the north of the road. The two number temporary construction compounds which are the subject of this application amount to approximately 3.79 hectares, part of which is located within the 14.7 hectare site of the Ringsend Wastewater Treatment Plant. Part of the application site is within the Poolbeg West Strategic Development Zone as defined by Statutory Instrument No. 279 of 2016. The Ringsend agglomeration, including the wastewater treatment plant, has an existing discharge authorisation licence in accordance with the requirements of the Waste Water Discharge (Authorisation) Regulations 2007, as amended. A licence review will be carried out in accordance with the requirements of the licence review process.

Component 2 – Proposed Development of a Regional Biosolids Storage Facility at Newtown, North Road (R135), Dublin 11

Permission is also sought for development of a Regional Biosolids Storage Facility at a separate 11-hectare site comprising:

- Demolition of existing single storey structures on site comprising of a security kiosk (approximately 22 square metres gross floor area), the weighbridge kiosk (approximately 19 square metres gross floor area), an ESB sub-station (approximately 16 square metres gross floor area) and an administration building (approximately 85 square metres gross floor area), together with the partial removal of existing internal roads and partial removal/diversion of existing drainage infrastructure as appropriate to accommodate the development.
- Provision of two number biosolids storage buildings, each approximately 50 metres wide, 105 metres long and 15 metres in height, including solar panels on the roof of one building. These buildings have a combined capacity to store up to 48,000 cubic metres of biosolids waste at any one time.
- Provision of four number odour control units, each with 18.2 metre-high discharge flues.
- Mechanical and electrical control building (approximately 35 square metres gross floor area, four metres high).
- Provision of a single storey site administration building for office, welfare facilities and meeting rooms (approximately 130 square metres gross floor area) and associated staff car parking.
- Use of the existing vehicular access off the R135, including provision of new 2.7 metre-high entrance gates to serve the Regional Biosolids Storage Facility.
- All ancillary landscape and site development works, including:
 - Provision of two number new weighbridge facilities (one number weighbridge on entry and exit of the Regional Biosolids Storage Facility).
 - Provision of new ESB sub-station (approximately 40 square metres gross floor area).

- Landscaping and boundary treatments, including new 2.7-metre-high boundary to North Road/R135.
- Provision of fire protection holding tank (approximately 6.7 metres high).
- Provision of a Heavy Goods Vehicle (HGV) cleaning and set-down area.
- Formation of a new footpath and landscaped verge to R135 along site frontage.
- Provision of drainage, water, external lighting and other utilities.
- Diversion of 450 millimetres surface water pipe.
- One number signage structure, 5.2 metres in height erected on posts accommodating two number signage zones: 2.4 metres x 1.7 metres and 2.4 metres x 1.2 metres, located at the site entrance.

All at the Ringsend Wastewater Treatment Plant, Pigeon House Road, Dublin and Newtown, North Road (R135), Dublin.

Decision

Grant permission under section 37G of the Planning and Development Act 2000, as amended, for the above proposed development in accordance with the said plans and particulars based on the reasons and considerations under and subject to the conditions set out below.

Determine under section 37H(2)(c) the sum to be paid by the applicant in respect of costs associated with the application as set out in the Schedule of Costs below.

Matters Considered

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.

Reasons and Considerations

In coming to its decision, the Board had regard to a range of matters, including the following:

European legislation, including of particular relevance:

- The EIA Directive 2011/92/EU amended by Directive 2014/52/EU (EIA Directive),
- The European Union Water Framework Directive 2000/60/EC,
- The European Union Urban Waste Water Treatment Directive 91/271/EEC,
- The European Union Bathing Water Directive 2006/7/EC,
- The Groundwater Directive (2006/118/EC),
- The Sewage Sludge Directive (86/278/EEC), and
- The Nitrates Directive (91/676/EEC).

National legislation, including of particular relevance:

- The European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended,
- The European Communities (Water Policy) Regulations, 2003, as amended,

- The European Communities Environmental Objectives (Groundwater) Regulations 2010, as amended,
- The Urban Waste Water Treatment Regulations 2001, as amended,
- The Waste Water Discharge (Authorisation) Regulations 2007, as amended, and
- The Bathing Water Quality Regulations 2008, as amended.

National and regional planning and related policy, including:

- The National Planning Framework – Ireland 2040 including Strategic Outcome 9 and corresponding Investment Action contained in the National Development Plan, 2018-2027,
- The Water Services Strategic Plan where the upgrading of Ringsend Treatment Plant is recognised as a significant contribution in meeting its obligation under the Urban Wastewater Treatment Directive,
- The National Wastewater Sludge Management Plan 2016 – 2041,
- The River Basin Management Plan for Ireland 2018 – 2021,
- The Greater Dublin Strategic Drainage Study (2005) and the Greater Dublin Drainage Strategy: Overview & Future Strategy (2018),
- The Regional Planning Guidelines for the Greater Dublin Area 2010-2022,
- The Draft Regional Spatial and Economic Strategy (RSES), and
- The Eastern-Midlands Region Waste Management Plan 2015 – 2021.

Local planning context – Ringsend Wastewater Treatment Plant component:

- The provisions of the Dublin City Development Plan 2016-2022, including Policies SI1 and SI2 which support development of water and wastewater systems by Irish Water in which the upgrading of the Ringsend Wastewater Treatment Plant is specifically referenced; related Planning Objectives SIO1 and SIO2 together with stated policies and objectives in support of the proposed development in the context of proper planning and sustainable development. Regard was also had to the land use zoning objectives for the area.

Local planning context – Regional Biosolids Facility component:

- The provisions of the Fingal County Development Plan 2017-2023, including stated policies and objectives, particularly Objective WM15 which requires to work with Irish Water and other relevant stakeholders to ensure the provision of facilities for the safe and sustainable management of sludges (sewage, waterworks, agricultural, industrial and septic tank) and Local Objective 78, in support of the proposed development in the context of proper planning and sustainable development. Regard was also had to the land use zoning objectives for the area.

The following matters:

- the current performance of the existing wastewater treatment plant and the demonstrated need to improve discharge standards in order to increase capacity and meet water quality standards for bathing waters, coastal waters, transitional waters and designated sensitive waters in Dublin Bay in accordance with the requirements set out under the legislation and emissions limit values contained in the licence granted by the Environmental Protection Agency under licence number D00-34-01,

- the entirety of the documentation that accompanied the planning application and reports and submissions which were submitted by all parties, planning authorities, prescribed bodies and observers and the further submission made by the applicant during the course of the application,
- the established site context on the Poolbeg peninsula, spatially separated from residential development and the pattern of development in the area,
- the planning history of the site,
- the nature, scale and design of the proposed development, including, in particular, the proven AGS technology and the associated nitrogen and phosphorous removal in relation to the Ringsend Wastewater Treatment Plant component and the nature, scale, design and purpose of the Regional Biosolids Facility component,
- the range of proposed mitigation measures set out in the submitted Environmental Impact Assessment Report and Natura Impact Statement (incorporating Appropriate Assessment Screening), and
- the submissions made in relation to the application and the report and recommendation of the Inspector.

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, would improve the quality of effluent discharged to the receiving water environment, would assist Ireland in meeting obligations set down under EU Directives, national legislation and planning policy, and would be acceptable in terms of odour, noise, vibration and traffic. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Appropriate Assessment: Stage 1 Screening:

The Board agreed with and adopted the screening (Appropriate Assessment Stage one) and conclusions carried out in the Inspector's report that the South Dublin Bay and River Tolka Estuary Special Protection Area (site code: 004024), the South Dublin Bay Candidate Special Area of Conservation (site code: 000210), the North Bull Island Special Protection Area (site code: 004006), the North Dublin Bay Candidate Special Area of Conservation (site code: 000206), the Howth Head Coast Special Protection Area (site code: 004113), the Dalkey Islands Special Protection Area (site code: 004172) and the Rockabill to Dalkey Island Candidate Special Area of Conservation (site code: 003000) are the only European Sites in respect of which the proposed development has the potential to have a significant effect.

Appropriate Assessment: Stage 2:

The Board considered the Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions and observations on file, and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development as part of the overall proposed upgrade project for the aforementioned European Sites 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, the following:

- (a) the likely direct and indirect impacts arising from the proposed development at the Ringsend Wastewater Treatment Plant and the Regional Biosolids Facility sites both individually, when taken together and in combination with other plans or projects,
- (b) the mitigation measures, which are included as part of the current proposal, and
- (c) 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 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 and wider proposed upgrade project, taking into account:

- (a) The nature, scale, location and extent of the proposed development across the Ringsend Wastewater Treatment Plant and Regional Biosolids Facility components.
- (b) The Environmental Impact Assessment Report and associated documentation submitted with the application.
- (c) The reports and submissions received from the planning authorities, observers and prescribed bodies and the applicant's further submission in the course of the application.
- (d) The Inspector's report.

The Board agreed with the summary and examination set out in the Inspector's report, the information contained in the Environmental Impact Assessment Report and associated documentation submitted by the applicant and submissions made in the course of the application. The Board is satisfied that the Inspector's report sets out how these were addressed in the examination and recommendation and are incorporated into the Board's decision.

Reasoned Conclusions on the Significant Effects:

The Board considered that the Environmental Impact Assessment Report, supported by the documentation submitted by the applicant, provided information which is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the proposed development on the environment, taking into account current knowledge and methods of assessment. The Board is satisfied that the information contained in the Environmental Impact Assessment Report is up to date and complies with the provisions of EU Directive 2014/52/EU amending Directive 2011/92/EU. The Board considered that the main significant direct and indirect effects of the proposed development on the environment are those arising from the impacts listed below. A Construction Environmental Management Plan (CEMP) is the overarching general mitigation embedded in the project design and delivery for the construction stage. In addition, plans relating to Waste Management, Invasive Species Management, Traffic Management, Odour Management, Monitoring Plans and Emergency Response Plans are also proposed. The remaining impacts, both positive and negative are:

- Benefits/positive impacts to **population and human health** arising as a result of the overall project upgrade due to providing increased treatment infrastructural capacity and improved level of treatment which would improve compliance with EU Directives and corresponding legislation and would be pivotal in supporting planned residential and economic growth in Dublin City and the region.
- Negative temporary impact on **population and human health** (recreational swimmers/water-based sporting activities) because of a deterioration in water quality during a nine-month period of decommissioning of aspects of the Wastewater Treatment Plant (during construction) and a corresponding temporary loss of recreational amenity which would be partially mitigated by carrying out the works in winter period when the recreational water-based activities are at seasonally low levels.

- Benefits/positive impacts on the environment (**soils, traffic, water quality, climate**) as a result of reduction in excavation and truck movements (estimated to be 70,000 HGV movements over an 18-month period) which would otherwise have been required to remove and transport rock and spoil during the construction phase of the undersea tunnel. During the operation phase, the proposal to omit the tunnel and associated diffuser point nine kilometres out to sea would also mean that there would be no deterioration of water quality at this location.
- Impacts arising on **land and soils** as a result of spread of invasive species (Japanese Knotweed) present on the Ringsend wastewater treatment site and which would be mitigated by the preparation and implementation of an Invasive Species Management Plan and method statement for the control of disturbance of soils containing Japanese Knotweed and the requirement that a suitably qualified ecologist would be engaged to oversee the implementation of the Invasive Species Management Plan and monitor the success of the mitigation measures post-construction.
- Risk of pollution of **receiving water environment** as a result of accidental spillages of chemicals, hydrocarbons or other contaminants entering the drainage system and discharging to the stream thereafter during the construction and operational phases. The impacts would be mitigated by measures within a Construction and Environmental Monitoring Plan (CEMP) and adherence to best practice construction measures and incorporation of appropriate drainage facilities. Measures set out in the CIRIA guidance document on 'control and management of water pollution from construction sites' would be implemented. The guidelines provided by Inland Fisheries Ireland (2016) on the protection of fisheries habitats during construction projects would also be adhered to.

- **Noise** impacts for the construction and operation phases which would be mitigated by the requirements to prepare and adhere to the Noise and Vibration Management Plans (NWMP) and comply with appropriate noise and vibration limits which are set out in the Environmental Impact Assessment Report in respect of the development of the Ringsend Wastewater Treatment Plant and the development of the Regional Biosolids Facility.
- **Odour impacts** for the operational phase which would be mitigated by the following:
 - Ringsend Wastewater Treatment Plant: Odour from the wastewater treatment plant (excluding storm tanks) would be required not to exceed 10 ouE/m³ as the 99.4th percentile of hourly averages at the boundary of the Ringsend Wastewater Treatment Plant site. The adopted odour annoyance criterion of 3 ouE/m³ as the 98th percentile of hourly averages would not be exceeded at any sensitive receptor location. The Odour Management Plan would be updated as necessary and implemented to ensure the above standard is achieved during construction and operation.
 - Regional Biosolids Facility: The adopted odour annoyance criterion of 3 ouE/m³ as the 98th percentile of hourly averages would not be exceeded at any sensitive receptor location.

The Board completed an environmental impact assessment in relation to the proposed development forming part of the overall proposed upgrade project and concluded that, subject to the implementation of the mitigation measures referred to above, including proposed monitoring as appropriate, 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 adopted the report and conclusions set out in the Inspector's report.

Conclusion on Proper Planning and Sustainable Development:

The benefits of the proposed development are considered to be positive. Its delivery would assist Ireland in meeting obligations set down under EU Directives, national legislation and planning policy expressed through the hierarchy plans which regulate development at a national, regional and local level. The proposed development would enable sustainable residential and economic growth through the delivery of increased wastewater treatment capacity while protecting the environment through improving the quality of effluent discharged to the receiving water environment. It has been demonstrated in the application that the improvement envisaged in final effluent quality can be achieved at the existing Ringsend Wastewater Treatment Plant by the incorporation of scientifically proven aerobic granular sludge technology into the treatment process together with associated nitrogen and phosphorous removal. When compared to the previously permitted and proposed long sea outfall (in tunnel) option, the current proposal has significant advantages and would be less intrusive on the receiving environment. The Regional Biosolids Storage Facility would assist in meeting the aims of the Sewage Sludge Directive, regulating the use of sewage sludge in agriculture to prevent harmful effects. Environmental impact assessment and appropriate assessment have also been considered as set out in the sections above. It can, therefore, be concluded that the proposed development is in accordance with the proper planning and sustainable development of the area.

CONDITIONS

Ringsend Wastewater Treatment Plant and Regional Biosolids Facility:

1. The proposed development shall be carried out and completed in accordance with the plans and particulars lodged with the planning application and the information contained in the Environmental Impact Assessment Report and Natura Impact Statement, 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 commencement of development or, in default of agreement, the matter shall be referred to An Bord Pleanála for determination, and the proposed development shall be carried out and completed in accordance with the agreed particulars.

Reason: In the interest of clarity and the proper planning and sustainable development of the area and to ensure the protection of the environment.

2. **Mitigation:**
 - (a) All mitigation and environmental commitments identified in the Environmental Impact Assessment Report (Table 17-1 of Volume 3 and 4) shall be implemented in full as part of the proposed development except as may otherwise be required to comply with the following conditions.

Monitoring:

- (b) All monitoring measures identified in the Environmental Impact Assessment Report (Table 17-2-of Volume 3 and 4) shall be carried out and the details of monitoring results shall be submitted to the Planning Authorities (Dublin City Council in respect of the Ringsend Wastewater Treatment Plant and Fingal County Council in respect of the Regional Biosolids Facility) except as may otherwise be required to comply with the following conditions.

Reason: In the interest of clarity and to protect the environment.

3. With the exception of the development hereby permitted, the proposed development at the Ringsend Wastewater Treatment Plant shall otherwise comply with the terms and conditions of permission granted under An Bord Pleanála case reference number 29N.YA0010, as amended by planning permission granted for alterations under An Bord Pleanála case reference numbers 29N.YM0002 and 29N.YM0004 and any further applications or alterations where permitted.

Reason: In the interest of clarity and the proper planning and sustainable development of the area.

4. The period during which the proposed development hereby permitted may be carried out shall be ten years from the date of this order.

Reason: 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.

5. A contract specific Construction and Environmental Management Plan (CEMP) and Waste Management Plan (WMP) shall be submitted to and agreed in writing with both planning authorities in respect of the proposed development at the Ringsend Wastewater Treatment Plant site and the Regional Biosolids Facility site. The CEMP and WMP shall detail and ensure Best Construction Practice and compliance with statutory obligations. As part of the CEMP, the submitted invasive species management plan shall be updated as necessary for the control or disturbance to soils containing Japanese Knotweed in accordance with Irish Water Information and Guidance Document on Japanese Knotweed. The plan shall include a method statement for the removal of invasive species identified as being present on site. The implementation of the invasive species management plan shall be overseen by a suitably qualified ecologist/botanist familiar with Japanese Knotweed.

Reason: To protect the environment during construction.

6.
 - (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 development at the Ringsend Wastewater Treatment Plant site and the Regional Biosolids Facility site.
 - (b) The developer shall comply with the requirements of the planning authorities in respect of minimising traffic disruption on the local communities, cleaning and repair of any damage to the public road networks during the construction and operation phases.

Reason: To protect the public road network and in the interest of traffic safety.

7. The proposed development shall adhere to the Noise and Vibration Management Plans (NWMP) and comply with appropriate noise and vibration limits set out in the Environmental Impact Assessment Report in respect of the overall development at Ringsend Wastewater Treatment Plant and the development of the Regional Biosolids Facility. During the construction and demolition phases, the proposed development shall comply with British Standard 5228 Noise Control on Construction and open sites Part 1, code of practice for basic information and procedures for noise control.

Construction Noise at the nearest sensitive receptor shall comply with the following limits:

- 70 L_{Aeq} (1 hour) dB – Daytime (07:00 – 19:00) and Saturdays (07:00 – 13:00)
- 65 L_{Aeq} (1 hour) dB – Evening (19:00 – 23:00)
- 55 L_{Aeq} (1 hour) dB – Night time (23:00 – 07:00)

Mitigation for the operation phase shall include a number of items such as selection of 'low noise' equipment and plant, vibration isolation mounts and appropriate siting of fixed plant.

The developer shall require the appointed contractor to employ and implement best practice construction noise and vibration management techniques throughout the construction phase in order to further reduce the noise and vibration impact to nearby noise sensitive receptors.

During the operation phase, noise shall be minimised by the selection of 'low noise' plant and equipment and incorporation of appropriate attenuation.

Noise monitoring during construction and commissioning and/or operation shall be carried out in accordance with the requirements of the planning authorities.

Reason: In the interest of the amenities of the surrounding area.

8. **Ringsend Wastewater Treatment Plant:**

During operation, odour from the wastewater treatment plant (excluding storm tanks) shall not exceed 10 ouE/m³ as the 99.4th percentile of hourly averages at the boundary of the Ringsend Wastewater Treatment Plant site. The adopted odour annoyance criterion of 3 ouE/m³ as the 98th percentile of hourly averages shall not be exceeded at any sensitive receptor location. The Odour Management Plan shall be updated as necessary and implemented to ensure the above standard is achieved during construction and operation.

Regional Biosolids Facility:

The adopted odour annoyance criterion of 3 ouE/m³ as the 98th percentile of hourly averages shall not be exceeded at any sensitive receptor location.

Reason: In the interest of the amenities of the surrounding area.

9. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within and proximate to the Ringsend Wastewater Treatment Plant site and the Regional Biosolids Facility site.

In this regard, the developer shall –

- (a) Notify the Department of Culture, Heritage and the Gaeltacht in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development.
- (b) Employ a suitably qualified archaeologist who shall monitor all site investigations and other excavation works.
- (c) Provide arrangements for the recording and for the removal of any archaeological material which the Department of Culture, Heritage and the Gaeltacht considers appropriate to remove.

In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: 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.

10. (a) Prior to commencement of development, the developer shall submit a detailed landscaping plan for each of the development components at the Ringsend Wastewater Treatment Plant and the Regional Biosolids Facility sites. Details, including strengthening of boundary treatment, screening of compounds and general landscape details, including timescales, shall be submitted to, and agreed in writing with, the planning authorities and the landscaping shall be carried out in accordance with the agreed details thereafter.
- (b) Prior to commencement of development, a detailed decommissioning and site restoration plan in respect of the construction compounds, together with a timescale for its implementation, shall be submitted to and agreed in writing with the planning authorities.

Reason: In the interest of the amenities of the surrounding area.

11. (a) The proposed development shall comply with the requirements of the planning authorities with respect to surface water management.
- (b) The existing surface water pipeline traversing the Regional Biosolids Facility site shall be realigned and a wayleave provided in accordance with the requirements of the planning authority (Fingal County Council).

Reason: In the interest of providing best practice for surface water management and to provide for future maintenance of the realigned pipe at the Regional Biosolids Facility site.

12. Prior to commencement of development, the design details for the Regional Biosolids Facility shall be submitted to and agreed in writing with the planning authority (Fingal County Council) for the prevention of environmental pollution in the event of a fire occurrence. Such detail shall also include an assessment of the risk of environmental pollution due to fire water and any mitigation measures which may be necessary.

Reason: In the interest of the protection of the environment and the amenities of the area.

13. All works to be undertaken within and adjacent to designated European Sites within Dublin Bay shall be undertaken in accordance with the requirements of a suitably qualified ecologist appointed following consultation with the National Parks and Wildlife Service.

Reason: In the interest of the protection of designated European Sites and qualifying interests, having regard to the sites' Conservation Objectives.

14. The developer shall pay to the planning authority (Fingal County Council) a financial contribution as a special contribution under section 48(2)(c) of the Planning and Development Act 2000, as amended, in respect of the upgrade and signalisation of the R135 and the N2 North Bound Slip Priority Junction. The amount of the contribution 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 for determination. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate. The application of indexation required by this condition 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.

Reason: It is considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning authority which are not covered in the Development Contribution Scheme and which would benefit the proposed development.



ATTACHMENT B.3.8:
INSPECTOR'S REPORT, FEBRUARY 2019



An
Bord
Pleanála

Inspector's Report ABP-301798-18

Development	10-year permission for development of the Ringsend wastewater treatment plant upgrade project including a regional biosolids storage facility
Location	Ringsend Wastewater Treatment Plant, Pigeon House Road, Dublin 4 and Newtown, North Road (R135), Dublin 11
Planning Authority	Dublin City Council South and Fingal County Council
Planning Authority Reg. Ref.	n/a
Applicant(s)	Irish Water
Type of Application	Application under the Provisions of S37E of the Planning and Development Act 2000, as amended.
Planning Authority Decision	n/a
Date of Site Inspection	9 th October 2018 & 10 th October 2018
Inspector	Patricia Calleary

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1.0 Introduction

- 1.1. This report relates to the assessment of a planning application made direct to An Bord Pleanála by Irish water under the Provisions of S37E of the Planning and Development Act 2000, as amended (hereinafter referred to as the 'Act'). Permission is sought for revisions and alterations to the existing and permitted development of the Ringsend Wastewater Treatment Plant (WwTP) at Pigeon House Road in Dublin 4, referred to as **component number one** and for a new Regional Biosolids Storage facility (RBSF) at Newtown, Dublin 11 referred to as **component number two**.
- 1.2. The revisions and alterations proposed to the Ringsend WwTP would broadly comprise the omission of the previously approved 9km-long sea outfall tunnel (LSOT) and the associated relocation of the existing effluent discharge point. Instead, it is now proposed to incorporate Aerobic Granular Sludge (AGS) technology into the secondary treatment process together with associated nitrogen (N) and phosphorous (P) removal which it is stated would significantly improve the standard of effluent treatment at the existing wastewater treatment plant. Consequently, it is also proposed to continue to discharge treated effluent through the existing outfall at the Liffey Estuary.
- 1.3. The proposed RBSF would be developed and used to store biosolids arising out of the treatment of sludge generated at the Ringsend WwTP prior to their re-use on agricultural lands.

2.0 Project Background

- 2.1. On the 16th November 2012, An Bord Pleanála granted approval to Dublin City Council (ABP Reference Number: 29N.YA0010) for development at the Ringsend Wastewater Treatment known as the 2012 Approval. The 2012 Approval permitted an expansion of the existing Ringsend WwTP to an average daily capacity of 2.4 million population equivalent (PE) in terms of reduction of Biochemical Oxygen Demand (BOD) and Suspended Solids (SS) and it included the following elements:

- Additional secondary wastewater treatment capacity at the wastewater treatment works site including associated solids handling and ancillary works;
- A 9-km-long sea outfall in tunnel (LSOT), commencing at an onshore inlet shaft approximately 350m east of the wastewater treatment works and terminating in an underwater outlet riser/diffuser in Dublin Bay;
- Various process improvement works known as surgical works;
- Road network improvements during the construction phase.

2.2. Two applications were subsequently made to alter the terms of the 2012 Approval (29N.YM0002 & 29N.YM0004) and An Bord Pleanála approved the alterations sought. An application for further alterations to the 2010 Approval is currently with the Board (29N.YA0010). Details of these are set out under the heading ‘Planning History’.

2.3. Certain elements of the 2012 Approval works are stated to have been advanced, primarily comprising preparatory works, mechanical plant installation and construction of access roads.

3.0 Site Location and Description

3.1. Ringsend WwTP site

3.1.1. Ringsend WwTP is located on the Poolbeg peninsula, at the mouth and south of the River Liffey in Dublin city. Treated effluent from the plant discharges to the Lower Liffey Estuary, c.1km to the east. The site with a stated 17.9 ha is located adjacent to and immediately west of ESB Poolbeg Power Station and immediately east of the Dublin Waste to Energy (WtE) facility. Irishtown Nature Reserve comprising an amenity grassland area is located immediately south. In the wider environment, Dublin city is located to the west and Dublin Bay is located to the east.

3.1.2. The Poolbeg peninsula is characterised by industrial, utility and amenity uses with dock facilities to its north. Poolbeg West is designated under Section 166 of Part IX of the Planning and Development Act 2000, as amended, as a Strategic Development Zone (SDZ) with provision for between 3000 and 3500 units as well as

commercial and other uses. In October 2017, under the provisions of the Planning and Development Act 2000, as amended, Dublin City Council decided by resolution to make the Poolbeg West Planning Scheme, which covers an area of 34ha immediately adjoining the south and west of the Ringsend WwTP site. At the date of this assessment and subsequent an appeal to the Board, the Poolbeg West Planning Scheme (ABP Ref. PL29S.ZD2013) remains under consideration by the Board. Part of the Ringsend WwTP application site incorporating a proposed temporary construction compound, C1, is located within the lands associated with the planning scheme.

3.1.3. Access to the site is along Pigeon House Road and through walkways associated with Irishtown Nature Reserve to the south. There are no residential properties in the immediate vicinity of the site. The existing outfall from the WwTP is positioned c.1km to the east of the plant, just east of the ESB Poolbeg Power Station. The wastewater discharge is mixed with water from the ESB power station which is used to cool the gas turbines at the power station before being discharged to the river.

3.1.4. The following provides a summary of the current treatment process which occurs at the Ringsend WwTP.

- **Preliminary Treatment:** includes flow management, stormwater handling and storage, screening and grit removal;
- **Primary Treatment:** comprises sedimentation and creating a primary sludge for treatment;
- **Secondary Treatment:** comprises a biological process which creates an activated sludge stream;
- **Disinfection:** comprises ultra-violet radiation to reduce the pathogenic and other organisms in the final effluent discharge;
- **Sludge Thickening:** comprises thickening, to reduce the volume, and storage of the primary and activated sludges;
- **Sludge Treatment:** comprises hydrolysis and anaerobic digestion which breakdown and stabilise the biological component in the sludge, producing energy as a by-product; and

- **Sludge Drying and Dewatering:** comprises drying or dewatering of the treated sludge, producing biosolids in the form of biofert and biocake.

3.2. Regional Biosolids Storage Facility (RBSF) site

- 3.2.1. The site of the Regional Biosolids Storage Facility (RBSF) occupies a stated 11 ha, located in Fingal at Newtown in Dublin 11, c.19km from the Ringsend WwTP site. It is bounded to the east by the R135 regional road and the N2 national primary road lies further east and curves around to the north. There is an established detached house and a scheme of eight residential units¹ and a community building under construction, located c. 25 metres from the site boundary, to the south east. The Dog's Trust is also located c. 250m to the south of the site.
- 3.2.2. To the immediate north there is an area of semi-natural dry meadow grassland. The site is bounded to the west and south by a stream which is a tributary of the Hunstown stream. The Hunstown stream connects with the River Ward approximately 4 km north of the proposed RBSF site. Hunstown quarry lies to the south and west and Hunstown power station lies to the south. 38 kV and a 110 kV electricity supply lines traverse the site. The surrounding area is primarily occupied by industrial, commercial and warehousing premises and Dublin Airport logistics park lies to the east of the site.
- 3.2.3. Fingal County Council (FCC) was granted approval by An Bord Pleanála under Ref. 06F.EL2045 (21st April 2006) for a waste recovery facility at the proposed RBSF site. Certain enabling works have since been carried out on site including the removal of vegetation and the construction of roads and other hard-standing areas. The development did not proceed further.

4.0 Proposed Development

- 4.1. Permission is sought for a ten-year period to carry out revisions to the development

¹ A scheme of six residential units was originally permitted on the adjoining site in 2015 and following an application for alterations, two additional units were permitted in 2018. The details are set out under the heading of 'Planning History'. It is assumed throughout this report that the construction underway includes eight houses.

which was approved in 2012 at the Ringsend WwTP. The primary difference in the revisions now before the Board and that previously approved is the proposal for the inclusion of AGS technology at the secondary treatment stage and the elimination of the 9-km undersea tunnel/LSOT while continuing to discharge at the existing outfall instead. The development would also comprise the construction of a RBSF at Newtown in Dublin 11. The purpose of the development of the RBSF is to store treated wastewater sludge in the form of biosolids prior to its re-use as a fertiliser / soil conditioner on agricultural lands. The biosolids would be primarily generated from treated sludge at the Ringsend WwTP and the proposed Greater Dublin Drainage (GDD) WwTP² as well as other Fingal municipal wastewater treatment plants. The facility would be used for storage of biosolids only and no treatment of sludge would take place.

4.2. The Ringsend WwTP has an existing discharge authorisation licence (D0034-01) in accordance with the requirements of the Waste Water Discharge (Authorisation) Regulations 2007, as amended. The licence was granted by the EPA in 2010 and has been amended in 2016 and 2018. It is proposed to continue to operate the plant as a live plant during construction.

4.3. Specific elements of the proposed development at each of the two sites are listed below.

4.3.1. **Ringsend WwTP**

- Proposals to reconfigure and retrofit up to 24 of the existing Sequencing Batch Reactor (SBR) tanks to facilitate the use of new Aerobic Granular Sludge (AGS) technology;
- Associated works including a sludge pasteurisation building and a phosphorous recovery building;
- Use on a permanent basis of a vehicular entrance granted a temporary permission under ABP Ref. 29N.YM0002 off Pigeon House Road;

² The GDD WwTP proposal is being progressed as a separate strategic infrastructure development planning application and is currently with the Board for its consideration.

- Underground electrical connection to an existing underground ESB cable along the south west corner of the southern boundary;
- Bypass culvert, ultraviolet lamps, internal road configurations and additional car parking;
- Continued use of two temporary construction compounds (C1 and C2), previously permitted for three years under ABP Ref. 29N.YM0004, for 10 years;
- Omission of the previously approved 9-km undersea tunnel / LSOT and the continued use of the existing outfall to the River Liffey serving the Ringsend WwTP;
- Omission of three temporary construction compounds previously permitted.

4.3.2. **RBSF**

- Demolition of a number of small structures, removal of internal roads and partial removal/diversion of existing drainage infrastructure;
- Provision of two biosolids storage buildings with a combined capacity to store up to 48,000 cubic metres of biosolids at any one time;
- Installation of odour control flues;
- Provision of mechanical and electrical control building and an administration building;
- Use of existing vehicular access off the R135.

4.4. Throughout the planning application documentation, reference is made to the **'Proposed Upgrade Project'** which is intended to mean the proposed development which is the subject matter of the current strategic infrastructure development (SID) application in combination with the elements of the 2012 Approval which are also being progressed. The relationship between the proposed development which is the subject matter of the current application and the 2012 Approval are set out in diagrammatic format in Figure 10 of the applicants planning report and Table 8 of the

report presents a list of the specific work elements proposed. The Environmental Impact Assessment Report (EIAR) accompanying the current application addresses the overall 'proposed upgrade project'. The proposed development is identified in the documentation as comprising two principal components as follows:

- **Component 1** - Ringsend WwTP: Upgrade works at the Ringsend WwTP;
- **Component 2** - RBSF: A Regional Biosolids Storage Facility at Newtown.

4.5. The planning application is accompanied by the statutory documents and drawings required for a SID application. It is also accompanied by a Planning Report, Technical Reports including Greater Dublin Drainage Study: Overview & Future Strategic Needs, Flood Risk Assessments for both sites, Engineering Design Report – RBSF and Architectural Design Statement – RBSF, an EIAR for both the Ringsend Wastewater Treatment Plant Upgrade Project and the Regional Biosolids Facility (Volumes 1 to 4 inclusive along with several supporting documents as appendices) and an Appropriate Assessment Screening Report and Natura Impact Statement. Following receipt of all reports and submissions by various consultees and observers, the applicant furnished a written response to the reports and submissions.

5.0 Planning History

5.1. The Ringsend WwTP has operated on its current site within the Poolbeg Peninsula since the early 20th century. An activated sludge system was introduced at the plant in the 1960s. Further improvement works were undertaken incrementally including the construction of a new inlet works, SBRs and new sludge handling facilities.

5.1.1. Approvals at the Ringsend WwTP site

An Bord Pleanála Ref. **29N.YA0010** – The Board granted approval (16th November 2012) for the following: Ringsend Wastewater Treatment Works Extension Project which would expand the existing wastewater treatment to its ultimate capacity of 2.4 million PE within the confines of its current site and achieve the required discharge standards. The proposed extension includes the following elements:

- Additional secondary wastewater treatment capacity at the wastewater treatment works site (c.400,000 PE) including associated solids handling and ancillary works;
- A 9-km LSOT commencing at an onshore inlet shaft approximately 350m east of the wastewater treatment works and terminating in an underwater outlet riser/diffuser in Dublin Bay;
- Road network improvements in the vicinity of the site (during the construction phase);

5.1.2. Alteration Decisions on the Ringsend WwTP site

- **PL29N.YM0002** – In June 2016, the Board altered the Approval in respect of certain temporary works and removal of temporary landscaping bunds at the Ringsend WwTP site;
- **PL29N.YM0004** – In January 2018, The Board altered the Approval to allow for the omission of three construction site compounds previously permitted and the provision of three new temporary construction site compounds at the Ringsend WwTP site;
- **ABP-301773-18** (current application) - This is a concurrent application whereby a request is sought by Irish Water to alter the terms of the 2012 Approval (29.YA0010). The nature of the request relates solely to condition no.1 attached to the Approval;

5.1.3. Planning Applications in the vicinity of the Ringsend WwTP site

- **An Bord Pleanála Reg. Ref. No. PL29S.ZD2013** – Poolbeg SDZ Planning Scheme appeal is currently under consideration by An Bord Pleanála;
- **An Bord Pleanála Reg. Ref. No. PL29S.EF2022** – Dublin Waste to Energy / Covanta granted permission on 19th Nov 2007;
- **An Bord Pleanála Reg. Ref. No. PL29N.PA0034** – Alexandra Basin Redevelopment (Dublin Port) granted permission on 8th July 2015;

- **Dublin City Council Reg. Ref. 2656/16** – National Oil Reserves Agency granted permission on 13th April 2016 for redevelopment/extensions;

5.1.4. Planning Applications on the RBSF site

- **PL06F.EL2045** – In April 2006, An Bord Pleanála granted approval to FCC for development of a construction and demolition waste recovery facility processing 75,000 tonnes per annum (tpa), a biological waste treatment facility treating 45,000 tpa of segregated domestic and commercial organic waste; a waste transfer facility processing 65,000 tpa of municipal solid waste and a sludge hub centre treating 26,511 tpa of municipal sludge;
- **FCC Reg. Ref. F08A/0624** – In August 2008, permission was granted to ESB to divert a section of the existing Finglas-Ashbourne 38kv line;

5.1.5. Planning Applications in the vicinity of the RBSF site

- **FW13A/0089/E1** – On 19th January 2018, FCC granted an extension of permission for the construction of a 3.6 MW renewable bioenergy plant;
- **F18/0146** – On 16th May 2018, FCC granted permission for a storage and distribution centre for new and imported vehicles;
- **F16A/0128** – On 30th March 2016, FCC granted permission for industrial and warehouse development;
- **FW14A/0162** On 2nd June 2015, FCC granted permission for the demolition of two houses and the construction of six new houses. Permission was subsequently granted on 11th June 2018 under **FW18A/0038** for amendments to develop an additional building to accommodate two additional residential units.

5.1.6. EPA Licence

- **Reg Ref. D0034-01** - Under the provisions of the Wastewater Discharge (Authorisation) Regulations 2007, as amended, the EPA granted a licence (July 2010) to discharge treated effluent into the Lower River Liffey. The licence was subsequently amended under Technical Amendments A and B.

5.1.7. Compulsory Purchase Order

- The lands at Newtown, North Road (R135) Dublin 11 were the subject of a separate application made under Section 37A of the Planning and Development Act, 2000, as amended, providing for the compulsory purchase of those lands. No objections were received in relation to the CPO.

6.0 Legislative and Policy Context

6.1. The following sets out the European, national, regional and local legislative and planning policy framework relevant to the assessment of the application.

6.1.1. European Directives

6.1.2. European Union Water Framework Directive 2000/60/EC (WFD) was adopted in 2000 as a single piece of legislation covering rivers, lakes, groundwater and transitional (estuarine) and coastal waters and includes heavily modified and artificial waterbodies. The overarching aim of the WFD is to prevent further deterioration of and to protect, enhance and restore the status of all bodies of water with the aim of achieving at least 'good' ecological status by 2015 (or where certain derogations have been justified to 2021 or 2027).

6.1.3. The European Union Urban Waste Water Treatment Directive 91/271/EEC amended by Directive 98/15/EC (UWWTD) sets out the legal requirements for the collection, treatment and discharge of urban wastewater and specifies the quality standards which must be met before treated wastewater is released into the environment.

6.1.4. The European Union Bathing Water Directive 2006/7/EC (BWD) establishes

procedures and standards for bathing waters. Under the Directive, all waterbodies are required to achieve a minimum of 'sufficient' quality which as a category lies above 'poor' and below 'good' based on main parameters for analysis Intestinal Enterococci and Escherichia coli (E. Coli).

6.1.5. **Other EU Directives of relevance**

- EIA Directive 2011/92/EU amended by Directive 2014/52/EU (EIA Directive);
- Birds Directive (79/409/EEC) amended by Directive (2009/147/EC);
- Habitats Directive (92/43/EEC);
- Groundwater Directive (2006/118/EC);
- Waste Framework Directive (2008/98/EC);
- Seveso III Directive (2012/18 EU);
- Sewage Sludge Directive (86/278/EEC);
- Nitrates Directive (91/676/EEC);

6.1.6. **National Legislation of relevance**

- The Waste Water Discharge (Authorisation) Regulations 2007, as amended;
- The European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended;
- European Communities (Water Policy) Regulations 2003, as amended;
- European Communities Environmental Objectives (Groundwater) Regulations 2010, as amended;
- Urban Waste Water Treatment Regulations 2001, as amended;
- Bathing Water Quality Regulations 2008, as amended;
- European Communities (Birds and Natural Habitats) Regulations 2011, as amended;
- European Communities (Waste Water Treatment) (Prevention of Odours and Noise) Regulations 2005;
- Waste Management (Registration of Sewage Sludge Facility) Regulations 2010;

- European Union (Good Agricultural Practice for Protection of Waters) Regulations 2017, as amended;

6.1.7. **National Planning and Related Policy**

6.1.8. 'National Planning Framework – Ireland 2040' (NPF) sets out 10 National Strategic Outcomes including Strategic Outcome 9:

- Water - Implement the Greater Dublin Strategic Drainage Study (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;
- Effective Waste Management - Waste planning in Ireland is primarily informed by national waste management policies and regional waste management plans. Planning for waste treatment requirements to 2040 would require:
 - Additional sewage sludge treatment capacity and a standardised approach to managing wastewater sludge and including options for the extraction of energy and other resources;
 - Biological treatment and increased uptake in anaerobic digestion with safe outlets for bio-stabilised residual waste;

6.1.9. Within the related National Development Plan, 2018-2027, National Strategic Objective 9 (Investment Actions) identifies that €8.5 billion would be invested by Irish Water over the period of the National Development Plan. A number of projects are listed under Investment Actions including:

- Ringsend Wastewater Treatment Plant (WwTP) project: This €190 million project would provide further capacity to support development in the Greater Dublin Region;
- Investment in waste management infrastructure is critical to our environmental and economic wellbeing for a growing population and to achieving circular economy and climate objectives;

6.1.10. Irish Water's Water Services Strategic Plan – A Plan for the Future of Water Services 2015 – 2040 (WSSP) outlines strategic objectives and aims including in particular:

- Objective WW - Provide Effective Management of Wastewater; Aims: WW1- manage the operation of wastewater facilities in a manner that protects environmental quality, WW2- manage the availability and resilience of wastewater services now and into the future and WW3- manage the affordability and reliability of wastewater services;
- Objective EN - Protect and Enhance the Environment; Aims: EN1- ensure that Irish Water services are delivered in a sustainable manner which contributes to the protection of the environment, EN2- operate water services infrastructure to support the achievement of waterbody objectives under the Water Framework Directive and obligations under the Birds and Habitats Directives and EN3- manage all residual waste in a sustainable manner;
- Objective SG - Support Social and Economic Growth; Aims: SG1- support national, regional and local economic and spatial planning policy, SG2- facilitate growth in line with national and regional economic and spatial planning policy and SG3- ensure that water services are provided in a timely and cost-effective manner;
- Objective IF - Invest in our Future; Aims: IF1 - manage assets and investments in accordance with best practice asset management principles to deliver a high quality, secure and sustainable service at lowest cost; IF2 - invest in assets while maintaining a sustainable balance between meeting customer standards, protecting the environment and supporting the economic development and growth of the country; IF3 - establish a sustainable funding model to ensure that Irish Water can deliver the required capital investment in order to achieve the required outcomes; IF4 - promote research and proven innovative technical solutions to meet standards set by our regulators including our objectives for cost and energy efficiency;
- Compliance with the UWWTD is considered a priority for Irish Water as is the

expansion and upgrading of the Ringsend WwTP.

6.1.11. National Wastewater Sludge Management Plan 2016 – 2041 (NWSMP)

- The NWSMP aims to ensure that the management of wastewater sludge over the next 25 years is standardised nationwide. The Plan recommends the development of regional facilities for the storage of biosolids;

6.1.12. River Basin Management Plan for Ireland 2018 – 2021 (RBMPI)

- The RBMPI sets out a range of actions aimed at achieving the objectives of the EU Water Framework Directive (WFD) and leading to a standardised approach to assessments;
- Regarding the Ringsend WwTP, it is located in Dublin City area of the Liffey catchment. In terms of transitional waters, the current ecological status (2010-2015) of the lower Liffey Estuary remains 'moderate' and the coastal water of Dublin Bay has a 'good' status. The intention of the RBMPI is to achieve or maintain a 'good' status for both by 2027;
- The proposed upgrade to the Ringsend WwTP is identified as an upgrade to be undertaken in support of compliance with the requirements of the UWWTD;

6.1.13. **Regional Planning and Development Framework**

6.1.14. Regional Planning Guidelines (RPGs) for the Greater Dublin Area (GDA) 2010 – 2022. While under review, the RPGs remain the appropriate regional planning policy framework document pending the preparation and adoption of the Regional Spatial and Economic Strategies (RSES) for the more recently formed Eastern and Midland Regional Assembly (EMRA).

- Under 'Strategic Policy – Physical Infrastructure', Policy 3 (PIP 3) seeks to: 'Protect and work to improve water quality in, and impacted by, GDA and seek that investment in water and surface water treatment and management projects is prioritised to support the delivery of the economic and settlement

strategy for the GDA through the coordinated and integrated delivery of all essential services supporting national investment’.

- In achieving this policy, Table 11 (Critical Strategic Projects – Wastewater & Surface Water) sets out 10 critical projects needed to address PIP3 including ‘expansion of the Ringsend Wastewater treatment plant to ultimate capacity’;

6.1.15. Draft Regional Spatial & Economic Strategy (RSES)

- Regional policy objectives include RPO 10.5 (Support Irish Water and authorities in planning growth and increasing compliance with the UWWTD);
- RPO 10.6 (Delivery of infrastructure, including Ringsend WWTP project);

6.1.16. Eastern-Midlands Region Waste Management Plan 2015 – 2021 (EMRWMP)

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

6.1.17. Greater Dublin Strategic Drainage Study - 2005 (GDSDS)

- Section 10.8 – The wastewater treatment strategy for the Dublin Region is in the first instance to maximise the capacity of existing facilities. This requires immediate expansion of Ringsend WwTP to its maximum capacity while engaging in an active programme of load management of existing and new non-domestic effluent loads to buy time to allow for the planning and construction of both the expansion of Ringsend and new regional drainage and wastewater infrastructure;

6.1.18. Greater Dublin Drainage Strategy: Overview & Future Strategy - May 2018 (GDDS)

- The review concludes that the projected loading on the Ringsend WwTP would reach the site capacity of 2.4 million PE between 2024 and 2027 depending on the actual growth realised in the catchment;

6.1.19. **Local Planning Context – Ringsend WwTP component**

6.1.20. Dublin City Development Plan 2016-2022 includes a host of policies and objectives relevant for the assessment of the Ringsend WwTP component including those which are set out under:

Policies

- SI1: Support Irish Water in the development of water and wastewater systems;
- SI2: Support and facilitate Irish Water to ensure the upgrading of wastewater infrastructure, in particular the upgrading of the Ringsend WwTP;
- GI17: Develop and protect coastal, estuarine, canal and riverine recreational amenities, GI20: seek continued improvement in water quality, GI22: Promote nature conservation of Dublin Bay, GI24: Conserve NHAs, SACs and SPAS;

Objectives

- SIO1: Support Irish Water in the implementation of the ‘Water Services Strategic Plan – A Plan for the Future of Water Services’;
- SIO2: Work closely with Irish Water to identify and facilitate the timely delivery of the water services required to realise the development objectives of this plan;
- GIO17: seek improvement of water quality and GIO19: maintain beaches to a high standard;

Land Use Zoning

- For the most part, the Ringsend WwTP site is zoned as ‘Z7’ with a stated objective ‘To provide for the protection and creation of industrial uses and to facilitate opportunities for employment creation including port related activities’;
- The proposed temporary compounds span across lands which are zoned Z7, Z9 and Z 14;

Other Local Policy Documents relevant to Ringsend WwTP

- Other local policy documents of relevance include the Dublin Port Masterplan 2040, Sandymount Village and Environs Architectural Conservation Area Report 2013, Village Design Statement - Sandymount, 2011;

6.1.21. **Local Planning Context – Regional Biosolids Storage Facility component**

- 6.1.22. Fingal Development Plan 2017-2023 includes numerous policies and objectives relevant to the assessment of the RBSF component including those which are set out under:

Strategic Policy

- Work with Irish Water to secure the timely provision of water supply and drainage infrastructure necessary to end polluting discharges to waterbodies, comply with existing licences and Irish and EU law and facilitate the sustainable development of the county and the region;

Objectives

- Objective WT03: 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;
- Objective WM15: Work with Irish Water and other relevant stakeholders to ensure the provision of facilities for the safe and sustainable management of sludges (sewage, waterworks, agricultural, industrial and septic tank);

Land Use Zoning

- 'HI' – Heavy Industry, the objective of which is: - 'Provide for heavy industry'. 'A waste disposal and recovery facility (High Impact)' is a permissible use within this zoning designation;

Local Objective

- Local Objective 78: Facilitate the development of infrastructure for waste management, including construction and demolition waste processing, biological treatment of organic waste, a sludge treatment facility and a waste transfer station;

Aviation Policies and Objectives

- The RBSF site falls within the Outer Airport Noise Zone and outside the Inner Airport Noise Zone. Aviation objectives of relevance include DA10 and DA16.

7.0 Reports and Submissions

- 7.1. Planning Authorities within whose functional areas the development is proposed.

Dublin City Council

- 7.1.1. Dublin City Council's Chief Executive's report focuses on the Ringsend WwTP upgrade works (component one). It is submitted that the proposal is supported by applicable European, national, regional and local planning policy. The applicant's submitted NIS is considered to be generally satisfactory. It is stated that disturbance impacts including noise on birds using Sandymount strand during summer should be given further consideration, as should the matter of potential impacts on prey species. Dublin City Council state that they recognise the need for the project to meet wastewater provisions of the region and consider the new AGS technology would ensure both capacity and compliance in the shortest timeframe, with less risk than the original LSOT option. It is considered that the proposed use of the C1 and C2 construction compounds for up to 10 years is not ideal. In conclusion, DCC state

that they do not object to the development and a number of conditions are recommended.

7.1.2. Reports from internal departments are included or referred to in the Planning report summarised as follows:

- Environment and Transportation Department – no objection;
- Roads and Streets Department, Road Planning Division – no objection subject to conditions;
- Parks & Landscape Services Division – no objection subject to conditions;
- SDZ team – no objection subject to conditions;
- Environmental Health – no objection.

7.1.3. It is set out in internal correspondence to the assistant Chief Executive that a resolution was adopted by the elected members, the details which are summarised as follows:

- Use of lands referenced C1, within the Poolbeg West SDZ boundary (currently under consideration by An Bord Pleanála) need to be reconsidered. DCC notes the temporary use of this land to service the construction phase but also notes that this should not prejudice the future development potential of these lands;
- Requests that the zoning agreed by Dublin City councillors during its consideration of the Poolbeg Planning Scheme SDZ should be maintained and no decision should be made pending the outcome of the Poolbeg West SDZ appeal.

7.1.4. In addition, elected members of the City Council made the following comments:

- The proposed WwTP is large and detrimental to the amenity of residents of large suburbs within Dublin City and should be relocated to a site in north Fingal;
- Development would result in serious construction impacts on local communities;
- Residents are concerned about odour impacts;
- Traffic impacts would arise on the local road network;

- Employment opportunities would be welcome;
- An Bord Pleanála should employ experts to analyse the environmental impacts, rather than accept environmental reports as given;
- Wastewater infrastructure should be provided in a number of locations apart from Ringsend.

Fingal County Council

7.1.5. The Chief Executive's report focuses on the proposed RBSF facility (component two). It is considered that the proposal is of strategic importance and is generally in accordance with the provisions of the Fingal Development Plan 2017-2023. The RBSF would be an integral part of Irish Water's infrastructure, used to store biosolid waste arising from the upgrade of the Ringsend WwTP. The Planning Authority states that they have no objection to the granting of permission for the RBS facility subject to conditions and their report includes recommended conditions.

7.1.6. Reports from internal departments are included. Of note are comments from:

- Archaeology – no archaeological features were identified within the site and therefore no archaeological mitigation recommended;
- Environment – no objection subject to conditions;
- Parks Division – conditions recommended;
- Transportation Planning – no objection subject to conditions;
- Water Services (foul sewer, surface water and water) – no objection subject to conditions;
- EHO – no objection subject to conditions;

7.1.7. In addition, elected members of the council expressed their welcome for the proposed development and made the following comments:

- Concerns expressed regarding the traffic route and submitted that the local road network would require alterations;
- Requested attachment of a condition requiring that no discharge of untreated effluent into Doldrum Bay would occur;
- Archaeological report noted;

7.2. Prescribed Bodies

DCHG

- Notes the findings of the archaeological assessment and recommends that the mitigation measures detailed are carried out in full;

HSE

- Refers to initial submission which it received during the non-statutory consultation period in 2016 and states that it has no further comments to add;

Inland Fisheries Ireland (IFI)

- Ringsend WwTP represents a significant ecological pressure on the regional fisheries resource. Estuaries serve as the natural linkage for migratory species such as salmon, sea trout, lamprey and eels migrating between freshwater and ocean environments;
- It is imperative that options of enhancing the treatment capability of the existing and proposed solutions are achieved so that the 2.4 million PE capacity for Nitrogen (N) and Phosphorous (P) emission limit values would be realised by 2022 (i.e. ahead of the planned 2028 year);
- Construction works for both projects should be in line with a Construction Environmental Management Plan (CEMP) and spoil material should be handled in accordance with the waste management legislation. Drainage within the RBSF buildings should be discharged directly to the foul sewer;

Transport Infrastructure Ireland (TII)

- Refers to plans for the Eastern Bypass of Dublin City and TII Corridor protection studies prepared and issued to the relevant planning and roads authorities in 2009 with revisions in 2014;
- Notes that the proposed 10-year temporary construction compound south west of the Ringsend WWTP (C1) would lie within the Eastern bypass protection corridor and submits that no permanent new development within the protection corridor would be appropriate;

Dun Laoghaire-Rathdown County Council

- Expresses support for the proposed development;

Meath County Council

- Section 7.12 of the Meath County Development Plan 2013-2019 sets out policies which support the upgrade proposal;
- Provision of a well-maintained quality wastewater treatment infrastructure with adequate available capacity is essential to facilitate sustainable development in Meath;

7.3. Public/Semi-State Bodies

ESB

- States that ESB is the owner and operator of significant energy generating assets in the Ringsend/Poolbeg area;
- Expressed support for the proposal;
- Capacity of the outfall channel needs to be assessed and any limitations identified;
- Requests a number of technical clarifications;

Dublin Airport Authority (DAA)

- The observation relates solely to the Biosolids facility;
- Essential that the construction and operation of the facility would not give rise to any increase in bird activity;
- Requests that mitigation measures outlined in the EIAR are implemented;
- Requests noise control requirements are implemented;
- Requires condition to any grant of permission requiring developer to agree crane operations;
- Requires that future growth demand of Dublin Airport would be catered for;

7.4. Observers

Chambers Ireland

- As the Ringsend WwTP is experiencing significant overload it should be upgraded to full capacity as an immediate priority to facilitate the current and future growth and needs of the region;

Dublin Chamber

- Welcomes and supports the proposal and considers it a much-improved proposal than that previously approved in 2012;

Sandymount & Merrion Residents Association

- No objection to the proposed RBSF. However, if this should fail to be installed, any increase in sludge volumes would give rise to serious problems;
- Pleased to note omission of the LSOT element previously proposed;
- Expresses serious concern with the use of lands marked C1 as a construction compound for a 10-year period. Requires that area which would be occupied by construction compound C1 would be reinstated to the condition which prevailed prior to its use by the Dublin Waste to Energy plant;
- Local Authority may have a conflict of interest if they are part of the PPP for the Waste to Energy Plant;

Meakstown Community Council

- Concerns made relate to the Regional Biosolids facility;
- Traffic concerns raised and seeks commitment that truck movements are surveyed / monitored;
- Seeks commitments regarding odour and noise control;
- Health impacts and monitoring of compliance required;
- Suggests that a community fund should be put in place;
- Seeks that community would be consulted by Irish Water regarding job creation linked to the proposal;

7.5. Applicant's response to submissions received from Planning Authorities within

whose functional areas the development is proposed.

Dublin City Council

- The construction works would not be visible to waterbirds on Sandymount Strand;
- Similar to wintering waterbirds, summering waterbird populations (which are a subset of the wintering waterbird species and which mainly present in smaller numbers) are also considered to be habituated to construction noise and no impacts on the waterbirds would result during the construction phase;
- Impacts to roosting terns would not arise as they would be well separated from the construction site and they would occupy roosts at Sandymount strand at night time;
- The WwTP upgrade works would not affect the conservation objectives for the South Dublin Bay and River Tolka Estuary SPA as no significant changes in fish populations are predicted and any changes in macroinvertebrate populations are likely to be minor and may improve tern prey resources;
- Use of construction compounds C1 and C2 would be limited to the construction phase for up to a period of 10 years. The use of C1 would not prejudice the implementation of the proposed Poolbeg West SDZ Planning Scheme and recognises future plans for the Eastern Bypass and Dublin District Heating system;
- Other matters around clarity about no use of local roads, removal of invasive species and landscape proposals are included;

Fingal County Council

- Puts forward suggestions for the achievement of FCC's suggested planning conditions concerning footpath and the payment of a special development contribution;
- Appropriate threshold for construction noise limits at nearby residential

receptors are consistent with BS 5228-1:2009+A1:2014: Code of practice for noise and vibration control on construction and open sites which sets out the rationale for the suggested noise limits at the nearest sensitive receptors;

- Proposals for monitoring dust as set out in the EIAR are sufficient to protect air quality for nearby sensitive receptors and states that it would be disproportionate to impose a requirement for continuous monitoring;

7.6. Applicant's response to submissions received from Prescribed Bodies

DCHG (DAU)

- Notes recommended mitigation proposals;

HSE

- Refers to submission made by HSE in April 2016 at the time of non-statutory consultation and states that topics raised at that point have been addressed in the EIAR. A copy of the HSE submission made at that point is enclosed;

Inland Fisheries Ireland

- The upgrade of the WwTP would result in greater capacity in terms of BOD and SS by 2021 and there is a proposed follow-on programme of retrofitting new technology until 2028 to meet nitrogen (N) and phosphorous (P) emission limit values, reaching a capacity of 2.4m PE by 2028;
- Applicant is exploring options centred around enhancing treatment capability of the existing SBRs and use of AGS solution in order to reach 2.4m PE capacity sooner;

Transport Infrastructure Ireland (TII)

- No permanent new development is proposed within the Eastern Bypass protection corridor. The use of C1 lands is required for a 10-year construction period;

Meath County Council

- Supportive statement noted;

EPA

- Waste Water Discharge Licence Register No. D0034-01 was issued in respect of the development and was since amended (December 2016 and February 2018);
- As part of its consideration of any licence review application that may be received which addresses the changes proposed, the Agency shall ensure that before the revised licence is granted, the licence application will be made subject to an Environmental Impact Assessment regarding the matters that come within the functions of the Agency;
- In the event of an application for a review of the licence, all matters relating to emissions to the environment from the activities proposed and the licence application documentation and EIAR will be considered and assessed by the Agency;

7.7. Applicant's response to Public/Semi-State Bodies Submissions

ESB

- Impact assessment of proposed discharge flow and dispersion of treated effluent from Ringsend WwTP is not dependant on the variable operation of the ESB generating station. Water quality would improve as a result of the development;

Dublin Airport Authority (DAA)

- Conditions relating to the RBSF noted and no objection raised;
- Within Irish Water's GDDS, headroom capacity of 20% provided for domestic/commercial growth and this can be utilised to meet industrial growth;

7.8. Applicant's response to observer's submissions

Chambers Ireland and Dublin Chamber

- Notes the submissions from Chambers Ireland and Dublin Chamber are supportive of the proposed development;

Sandymount and Merrion Residents Association

- Construction compounds C1 and C2 are required to facilitate the development for a construction period of up to 10 years. Compound C3 does not form part of this application *per se* as it would not be required beyond its permitted 3-year planning lifetime;
- The GDD project is a separate project being progressed by Irish Water and is currently before ABP for its consideration;

Meakstown Community Council

- Facility would require a certificate of registration from the Local Authority;
- HGVs should be required to adhere to a route via the M50 and the roads in Meakstown area would not be used in the deliveries to and from the RBSF;
- Vehicular traffic would give rise to noise increase of less than 1 dB, which can be regarded as imperceptible;
- The RBSF would be operated and managed in accordance with an Odour Management Plan (OMP) and details of same are summarised. States that noise impact would not be insignificant;
- There are currently no proposals to change the agricultural lands on which the biosolids would be landspread;
- c.98% of biosolids are currently re-used on agricultural lands as a soil conditioner and fertiliser;
- Land spreading is subject to a number of environmental controls (details provided);
- Commitments to support the community are outlined and include clauses to leverage employment opportunities for local communities and associated contract conditions;
- Improvement works are proposed (footpath and landscaped verge) to the R135 along the front (east) of the RBSF site.

8.0 Pre-Planning and Consultation

8.1. Summary of consultations

- Pre-planning consultation held with An Bord Pleanála under Section 37B(1) of the Act under File Reference No. **PL29S.PC0203**;
- Meetings with DCC (planning and internal departments);
- Meetings with FCC (planning and internal departments);
- EIAR Scoping consultation (consultation with prescribed bodies and key stakeholders);
- Public Consultation (public open days, additional meetings, online information and a direct phone-line, media campaign, E-Zine Newsletter, website);
- Seven weeks of statutory public consultation.

9.0 Assessment overview

9.1. Having regard to the requirements of the Planning and Development Act 2000, as amended, my overall assessment is considered under the headings of Planning Assessment, Environmental Impact Assessment (EIA) and Appropriate Assessment (AA). There is inevitable overlap between certain aspects of the three sections, for example, with matters raised falling within both the planning assessment and the environmental impact assessment. In this regard and to avoid repetition, assessment of matters covered in any of the three sections are not repeated. My assessment is informed by all of the documentation received with the planning application for the proposed development and all of the subsequent reports, submissions and observations and the applicant's response received as well as information gathered during my site visits of both the Ringsend WwTP and RBSF sites and their surrounding areas.

10.0 Planning & Sustainable Development Assessment

10.1. Introduction

10.1.1. I consider that the key issues arising in respect of the planning assessment comprise

the following:

- Principle and Water Quality
- Legislative and Policy Considerations
- Seveso Considerations
- Flood Risk
- Traffic
- Design and Amenity
- Community Gain
- Other Consents

10.2. Principle and Water Quality

10.2.1. Ringsend WwTP component

10.2.2. The current WFD status of the Liffey Estuary Upper, Liffey Estuary Lower and Tolka Estuary are 'moderate' and Dublin Bay has an overall status of 'good' in accordance with the criteria set out in schedule 4 of the European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended.

10.2.3. The Tolka and Lower Liffey Estuaries are classified under the UWWTD and corresponding Urban Wastewater Treatment Regulations 2001, as amended, as 'sensitive' waterbodies because they are subject to eutrophication. Consequently, if effluent is to continue to be discharged to the Liffey Estuary at the existing outfall, it is required to achieve 10 mg/l Total Nitrogen (N)³ and 1 mg/l Total Phosphorus (P).

10.2.4. Under the BWD and Bathing Water Regulations 2008, as amended, the status for designated bathing waters in 2017 are Dollymount Strand: 'Good Quality', Sandymount Strand: 'Poor Quality', Merrion Strand: 'Poor Quality' and Seapoint: 'Excellent Quality'. Under the Directive, all waterbodies are required to achieve a minimum of 'sufficient' status.

³ Total nitrogen = the sum of the inorganic **nitrogen**, organic **nitrogen**, and ammonia

10.2.5. It is well reported that the Ringsend WwTP is currently overloaded, whereby it is experiencing average daily loads of 1.8-1.9m PE. With the completion of the planned and previously permitted capacity upgrade under the 2012 Approval, it is expected that in terms of reduction of BOD and SS, capacity at the plant will increase to 2.4m PE by 2021. Nonetheless the treated effluent would continue to remain above the limits set in its discharge licence (mirroring those of the UWWTD) in terms of Total N and Total P. Table 1 below sets out the emission limit values (ELVs) required to be met under the current Discharge licence.

Table 1: Standards of Treatment (ELVs) for Upgraded Ringsend WwTP

Parameter	Emission Limit Values	Commentary
pH	6-9	-
Toxicity	5 TU	-
Faecal Coliforms	100,000 MPN/100ml	Bathing Season
BOD5	25 mg/l	Annual 95th Percentile. Peak Limit: 50mg/l
COD	125 mg/l	Annual 95th Percentile. Peak Limit: 250mg/l
Suspended Solids	35 mg/l	Annual 95th Percentile. Peak Limit: 87.5mg/l
Total Nitrogen (N)	10 mg/l	Annual Average
Total Phosphorus (as P)	1 mg/l	Annual Average

10.2.6. The proposal under the 2012 Approval involved relocating the treated effluent outfall to a point beyond the area subject to designation as 'sensitive' waterbody. As the current proposal intend to eliminate the undersea/LSOT tunnel, the key issue which arises in the assessment is whether or not that the treated effluent would reach the required standards under the Discharge Licence and UWWTD such as to be capable of continuing to discharge at its current outfall location.

10.2.7. The proposals which are the subject matter of the current SID application involve the retrofitting of new AGS technology across 24 existing Sequencing Batch Reactor (SBR) tanks over a phased basis with the intention of meeting the required nitrogen (N) and phosphorous (P) emission limit values detailed above. AGS technology involves a biological nutrient removal process as part of the wastewater treatment

cycle resulting in a higher standard of treated effluent. The overall intention is that with the application of AGS, the treatment capacity of 2.4m PE in terms of Total P and Total N would be reached by 2028. The applicant has stated that they are investigating options of providing increased capacity earlier though these options although these do not form part of the current SID application.

- 10.2.8. The principal anticipated changes in effluent discharge load from the WwTP are summarised in Table 2 below.

Table 2 - Final Effluent Discharge – Load Reduction Summary

Final Effluent Discharge – Load Reduction Summary Parameter	Current Average Load	Future Average Load	% Reduction
BOD	8,739 kg/day	7,206 kg/day	17.5%
Suspended Solids	16,205 kg/day	10,508 kg/day	35.2%
Ammonia	4,370 kg/day	600 kg/day	86.3%
(Dissolved Inorganic Nitrogen (DIN)	5,939 kg/day	4,804 kg/day	19.1%
Molybdate Reactive Phosphate (MRP)	1,056 kg/day	420 kg/day	60.2%

- 10.2.9. In addition, the incorporation of AGS would lead to a reduction in bacteriological (E.Coli) content in the final effluent.

- 10.2.10. It is set out in the EIAR (Volume 2) that the proposed development together with the permitted capacity upgrade would enable the upgraded WwTP to meet the level of treatment required to achieve ELVs set out in the EPA Discharge licence and the current national and European legislative requirements. In Volume 3 of the EIAR, under the heading of Biodiversity, it is stated that the current emission values are approximately 13.6 mg/l N and 3.9 mg/l P and when the overall project is implemented, the licence ELVs of 10 mg/l N and 1 mg/l P would be achieved. Water quality modelling was carried out to assess the dispersal, dilution, and decay of the final effluent parameters on the receiving waters. The details and output are presented in Volume 3 of the EIAR, under the heading of Water. I have discussed

the modelling and associated outputs in my assessment of water under the EIA section of this report.

- 10.2.11. Outside of this application, the current discharge licence (D0034-01) would be subject to a review process by the EPA in which, in relation to effluent discharge, environmental impact assessment and appropriate assessment would be taken into account. By reference to the 'sensitive' status attributed to the Lower Liffey under the UWWTD, it can be assumed that the ELVs of 10 mg/l N and 1 mg/l P respectively would not be changed in any licence review.
- 10.2.12. Separately, outside the scope of this application, Irish Water is progressing the Greater Dublin Drainage (GDD) wastewater treatment facility in North County Dublin together with alterations to the drainage network including diversion of flows from the Ringsend catchment. A map showing the two intended catchments (Ringsend WwTP and GDD WwTP) in context and the proposed diversion of drainage flows is presented as Fig 4 (Future Ringsend WwTP and GDD catchments) in the applicant's planning application report accompanying this application.
- 10.2.13. **AGS Technology / Omission of LSOT**
- 10.2.14. As stated above, the intention behind the proposed development at Ringsend WwTP is that by incorporating AGS technology leading to Total N and Total P reduction, a higher treatment standard of effluent would be achieved. Consequently, it is submitted that the effluent could continue to discharge at its current outfall and the proposal for the discharge to Dublin Bay through a 9-km piped outfall in an undersea tunnel or LSOT could accordingly be eliminated. AGS was not a proven technology at the time of the application for 2012 approval. It has since been scientifically proven as a means to produce higher treatment of effluent at the secondary treatment stage. As a process, the AGS also allows for recovery of phosphorous.
- 10.2.15. Reference plants which employ AGS technology have been detailed in Volume 2 of the EIAR. These include two such plants located in the Netherlands and more recently (2015-2016) three smaller scale plants in Ireland.

10.2.16. **AGS Technology Trials**

10.2.17. To assess the suitability of the AGS technology at the Ringsend WwTP, a programme of trials referred to as 'process proving' was undertaken on existing tanks using 'Nereda' AGS technology, developed in the Netherlands. Details of the trial at the Ringsend plant and resultant outcomes are presented in the applicant's submitted AGS Process Proving summary report which is contained as an appendix within Part B of Volume 2 of the EIAR. Essentially the trial involved a small-scale Process Proving Unit (PPU), known as Process Proving Step 1 (PPS1) which ran for a year followed by a full-scale trial / Process Proving Step 2 (PPS2) which ran for a three-month period. The key elements of the trail are outlined and considered below.

PPS1

10.2.18. PPS1 included loadings comparable to the WwTP's raw influent once the future Upgrade project would be complete including a phosphorous fixing process stage.

10.2.19. Results of effluent quality in this trial demonstrated that the AGS technology process met the performance standards required under the UWWTD and the UWWT Regulations, 2001 as amended. I have provided a summary of the results below in Table 3.

Table 3: PSS1 Trial – Effluent Parameters

Effluent Parameter	Effluent Standard required (Annual)	Effluent Standards Achieved in PPS1 Period (June 2015-June 2016)
Total Nitrogen (N) - Average	<=10	6.9
Total Phosphorous (P) - Average	<=1	1.0
BOD – 95 th percentile	<25	10.9
COD – 95 th percentile	<125	61.0
TSS – 95 th percentile	<35	22.0

10.2.20. In relation to Total Phosphorous (P), the required performance standard was met and it is stated that there were a number of factors specific to the trial of the PPU

installation that could readily be addressed with a full-scale operation. This coupled with the intention to include phosphorous fixing and the ability for occasional chemical dosing with metal salts to precipitate phosphorus in the process units is stated would further reduce P levels in the full-scale operation.

PPS2

10.2.21. PPS2 involved a full-scale trial of the technology in a retrofit of one of the existing 24 SBR cells at the Ringsend WwTP and it was operated using design flows and design loads which were representative of the full-scale operation. Recording of results excluded an 8-day period after a pump was taken out of service following failure. Results of effluent quality demonstrated that use of AGS technology met the performance standards required under the UWWTD in all but P. I have summarised these in Table 4.

Table 4: PSS2 Trial – Effluent Parameters

Effluent Parameter	Effluent Standard (Annual) required	PPS2 Period (June 2015-June 2016)
Total N – Average	<=10	6.1
Total P - Average	<=1	1.1
BOD – 95th percentile	<25	9
COD – 95th percentile	<125	56
TSS – 95th percentile	<35	26

10.2.22. The Total P value achieved during the PPS2 trial is slightly above the required standard. This is stated to have been linked to a period where a feed pump failed during the trial. No correction was applied and it is stated that the introduction of a limited use of backup chemical dosing would have been sufficient to bring Total P back to compliant levels. The chemical dosing was not applied and the reason put forward by the applicant is that the trial had not yet been completed. It is submitted that with the planned backup chemical dosing, this standard would have been achieved in the trial.

10.2.23. **Discussion**

- 10.2.24. It can readily be concluded that the need for the project to bring the plant back in compliance with both the UWWTD and the corresponding ELVs attached to the EPA licence is necessary. I am satisfied that it has been demonstrated that this is technically achievable using the proposed AGS technology with associated phosphorous and nitrogen reduction as has been demonstrated through trials, the details of which I have outlined above. While the Total P performance standard was not achieved in the PPS2 trial period, I am satisfied with the rationale put forward as to how this could be addressed in the full-scale operation such that its adoption would produce higher quality of final effluent which could continue to be discharged to the lower Liffey Estuary.
- 10.2.25. In their report, DCC have expressed their support for the development proposal which it is stated would ensure both capacity and compliance in the shortest timeframe and with less cost and less risk than the previously proposed undersea tunnel (LSOT).
- 10.2.26. If the current development is not progressed, the non-compliance with the required effluent standards would continue and the quality could potentially further deteriorate as the wastewater influent volumes increase in line with increases in economic activity and population growth in the Greater Dublin Area as proposed in the national and regional planning policy documents. This scenario would also mean continuing non-compliance with the UWWTD and the ELVs attached to the plant's licence which would not be acceptable or sustainable and failure to provide the needed infrastructure would risk substantial fines for Ireland from the Court of Justice of the European for reasons of non-compliance with the nutrient standards in the Directive. It must be acknowledged however that the option to pump the treated effluent via the 9 km LSOT beyond the 'sensitive' waters in Dublin Bay would continue to be available. However, it is clearly evident that the LSOT option is currently less preferred and would result in higher levels of environmental risk and cost.
- 10.2.27. The achievement of improved standards and bringing the plant into compliance with the requirements of the UWWTD would clearly result in a significant positive benefit on the receiving water environment such that the LSOT is no longer required. The

revision to use of AGS technology and omit the LSOT would clearly result in environmental benefits which are further detailed in the EIA section of this report.

10.2.28. Overall, the development to treat the effluent to a higher standard and to omit the LSOT is clearly a more sustainable wastewater solution. There is no doubt that the overall project delivery is crucial in serving the planned economic and population growth targets set for the Dublin region. I have considered the project in terms of the legislative and policy framework further below.

10.2.29. **RBSF Component**

10.2.30. Treatment of wastewater results in the production of two types of raw sludges which in turn require treatment and processing. These include primary sludge (PS) in the form of solids removed in the primary settlement tank and surplus activated sludge (SAS) or surplus activated granular sludge (SAGS) which is a sludge biomass arising from the sludge treatment process. Subsequent to treatment of sludge, which occurs and would continue to occur at the Ringsend WwTP site, biosolids consisting of biocake and biofert would continue to be produced. Biosolids are biologically stable and generally have a low odour and are free of harmful pathogens. Biocake is a wet cake with c.26% dry solids and biofert is drier with c.92% dry solid matter.

10.2.31. The intended purpose of the RBSF is to store the biosolids from the Ringsend WwTP and the WwTP under the GDD project (if permitted). The RBSF is included as part of the overall planning application incorporating Ringsend WwTP Upgrade Project. Separately, the Board will be aware that the RBSF is also included as part of the overall planning application for the GDD project.

10.2.32. Biosolids currently produced at the Ringsend WwTP are stored at a facility in Thornhill in County Carlow which it is stated by the applicant to have a certificate of registration from Carlow County Council for a maximum annual throughput of 25,000 tonnes. Following the upgrade at the Ringsend WwTP, it is anticipated that the volumes of sludge and biosolids would increase because of improvement in wastewater quality and there would be insufficient storage capacity in Thornhill to cater for the current Ringsend WwTP and the new GDD WwTP. Annual production and storage volume anticipated are set out in Table 2-1 'Storage volume requirement for all scenarios' of the applicants engineering design report for the RBSF. In 2040,

in 'the most likely scenario', 90,311 tonnes of biosolids would be generated in the catchment including 16,630 tonnes of biofert and 41,968 of biocake from the Ringsend WwTP, 21,115 tonnes of biocake from the GDD WwTP and 10,578 tonnes of imported sludges in the form of biocake from smaller municipal treatment plants and septic tanks. Collectively, this is shown as requiring 34,615 cubic metres of storage. In a 'high volume scenario', 90,331 tonnes would be generated in the catchment, requiring 40,464 cubic metres of storage. A breakdown and further details of biosolids volumes are presented in Table 2-1.

10.2.33. A third biosolid material, 'struvite', which is 'recovered phosphorous', would also be produced at Ringsend WwTP following the commissioning of the phosphorous recovery system planned to occur in 2021. Struvite has a moisture content of c.92%. Irish Water have set out their future intention to apply for an 'end-of-waste' approval and/or approval under regulations for Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) for the 'struvite', however, pending such approvals, it is intended to be stored in segregated bays at the RBSF. An estimated quantity of 6,000 tonnes per year of struvite is anticipated to be stored at the facility and would be handled similar to other biosolids generated at the Ringsend WwTP whereby it would be stored for certain months of the year prior to its use in agriculture. This is stated to be an interim storage solution as it is anticipated that post 2025, the product would be bagged at the Ringsend WwTP and made directly available to market as a fertiliser.

10.2.34. The rationale for the development of the RBSF to store biosolids produced at the Ringsend WwTP and the proposed WwTP under the GDD project has been clearly set out and it can be concluded that there is a requirement for such a facility to allow for storage of increased volumes of biosolids at a central location prior to land spreading during periods in Spring and Autumn. Land spreading would occur under nutrient managements plans and these would require approval by the respective local authorities as regulated under European Union (Good Agricultural Practice for Protection of Waters) Regulations 2017, and subsequently amended by SI 65 of 2018, European Union (Good Agricultural Practice for Protection of Waters) (Amendment) Regulations 2018. I am satisfied that this is a preferred method for sludge/biosolids management and in line with the policy direction outlined below.

10.3. **Legislative and Policy Considerations**

10.3.1. **European Legislation and Policy**

10.3.2. In terms of improving water quality, the outcome would be a higher standard of final effluent discharge and an overall improvement in the quality of the receiving waters. This would be consistent with the aims of the WFD which seek to protect, enhance and restore the status of all bodies of water with the aim of achieving at least 'good status'. In the case of the receiving waters in Dublin Bay, the target date was extended from 2015 originally to 2027 due to Dublin Bay's location at the bottom of the catchments for the Rivers Liffey, Dodder and Tolka. The development proposed would assist in ensuring that Ireland improves its compliance with the WFD.

10.3.3. This positive outcome would also be consistent with the Bathing Water Directive which requires a minimum target of 'sufficient' required to be achieved for all bathing waters. The ratings are based on the amount of colony forming units of microbiological parameters E.coli and Intestinal Enterococci within a sample.

10.3.4. As is evident in consideration of the principle of the development outlined above, improvement would significantly assist Ireland in complying with its obligations under the UWWTD through the higher standard of effluent treatment proposed and subsequent improved quality of water to be discharged to the receiving water environment.

10.3.5. The provision of the RBSF would assist in delivering the aims of the Sewage Sludge Directive which seeks to encourage the use of sewage sludge in agriculture while regulating its use to prevent harmful effects on soil, vegetation and man. It would also assist in achieving compliance with the EU Nitrates Directive by allowing biosolids to be stored when application of fertilisers of land is prohibited and hence preventing nitrates from agricultural sources polluting ground and surface waters.

10.3.6. **National Policy Framework**

10.3.7. Strategic Outcome 9 of the NPF (Water) envisages the implementation of the GDSDS, through enlarging capacity in existing wastewater treatment plants including Ringsend and providing a new treatment plant in North County Dublin (GDD Project).

In terms of effective waste management, this Strategic Outcome also requires a standardised approach to managing wastewater sludge. The proposed development is clearly consistent with this strategic outcome.

- 10.3.8. Under Strategic Investment Priorities, The National Development Plan 2018-2027 makes specific reference to the Ringsend WwTP as a project proposed to provide further capacity to support development in the Greater Dublin region. It also includes provision for waste management and resource efficiency to achieve a circular economy and meet climate change objectives. The implementation of the proposed development is clearly in line with the strategic outcome and if permitted would support the growth of Dublin as the capital city of Ireland and its surrounding region.
- 10.3.9. Under the River Basin Management Plan for Ireland 2018-2021 (RBMPI), Ringsend WwTP is identified as the single largest wastewater treatment plant in the country, accounting for some 41% of the total wastewater load. The proposed upgrade to the Ringsend WwTP is identified in this plan.
- 10.3.10. In 2017, Irish Water carried out an internal review of the GDSDS and the findings are set out in a document – Greater Dublin Drainage Strategy Overview & Future Strategic Needs Asset Planning (May 2018). This review sets out the need for the Ringsend WwTP project. The plant capacity is designed to cater for 1.65m PE and is currently experiencing 1.9m PE, resulting in breaches of both the EPA discharge licence and the UWWTD.
- 10.3.11. Irish Water’s WSSP sets out its priority for compliance with the UWWTD and highlights the need for upgrading of wastewater infrastructure. It is noted that the Ringsend WwTP upgrade forms a crucial part of this compliance and would facilitate the delivery of objectives set out in the WSSP.
- 10.3.12. The NWSMP, published by Irish Water in 2016, identifies the reuse of treated wastewater sludges (biosolids) on agricultural land under nutrient management plans as the current preferred option in the short to medium term. The NMSMP contains a recommendation for the development of regional facilities for the storage of biosolids. The RBSF would be strategically located to serve the Ringsend WwTP and also the GDD project (if permitted).

- 10.3.13. Overall, having regard to the above, I am satisfied that the proposed development including the Ringsend WwTP and the RBSF components align with applicable national policy. The development would assist Ireland in meeting its obligations under the aforementioned EU Directives and related national legislation. It would undoubtedly be pivotal in enabling sustainable urban growth by providing such crucial wastewater treatment and would address the current environmental risk posed by non-compliances at the existing WwTP. The proposed RBSF would support the overall development for the reasons outlined above.
- 10.3.14. **Regional Planning Policy**
- 10.3.15. While under review, the RPGs for the GDA 2010-2020 remain the appropriate regional policy framework document until such time the RSES for the EMRA are finalised and adopted. In terms of the RPGs, strategic investment priorities in relation to wastewater infrastructure are identified in Table 11 of the Guidelines. The expansion of the Ringsend WwTP to its ultimate capacity is listed as a critical strategic project.
- 10.3.16. The Draft RSES for the EMRA identifies both the Ringsend WwTP and the GDD projects as wastewater infrastructure projects which are ongoing to deliver capacity at a large scale to the metropolitan area. Regional Policy Objectives include RPO 10.5 (Support Irish Water and Authorities in planning growth and increasing compliance with the UWWTD) and RPO 10.6 (Delivery of infrastructure including Ringsend WwTP project).
- 10.3.17. The Eastern-Midlands Region Waste Management Plan 2015 – 2021 sets out policies for the management and re-use of what would otherwise be waste. Of relevance to the proposed RBSF development, Section 7.4.7 sets out that the management of sludge would be co-ordinated between Local Authorities and Irish Water. Policy H1 seeks to ‘work with relevant stakeholders and take measures to ensure systems and facilities are in place for the safe and sustainable management of sludges (sewage, waterworks, agricultural, industrial and septic tank) generated in the region having due regard to environmental legislation and prevailing national guidance documents, particularly in relation to the EU Habitats and Birds Directive’.
- 10.3.18. It is evident that the proposed development is supported by and would comply with

applicable regional policies and would provide improved infrastructural benefits for the existing and future GDA growth while improving the receiving water environment.

10.3.19. Local Planning Policy - Ringsend WWTP

10.3.20. At a local level, the development is supported by a host of policies and objectives set out in the Dublin City Development Plan 2016-2022. The Development Plan identifies the efficient and timely delivery of necessary infrastructure capacity as necessary for successful urban development. Ensuring the delivery of infrastructure in a sustainable manner is recognised as being crucial to support the sustainable growth of the city. The Development plan references the expansion and upgrading of the Ringsend WwTP as an urgent priority for Irish Water.

10.3.21. Policies of specific relevance include: SI1 (support provision of water, conservation and wastewater systems), SI2 (support and facilitate Irish Water to ensure upgrading of wastewater infrastructure, including Ringsend WwTP) and GI17 (develop and protect coastal, estuarine, canal and riverine recreational amenities).

10.3.22. Objectives include: SIO1 (support Irish Water in the implementation of the 'Water Services Strategic Plan'), SIO2 (work closely with Irish Water for delivery of water services), GIO17 (seek improvement of water quality, bathing facilities and recreational opportunities) and GIO19 (maintain beaches to a high standard).

10.3.23. In terms of zoning, the Ringsend WwTP facility spans across the two areas divided by Pigeon House Road. The majority of the site is zoned 'Z7' with a corresponding objective 'To provide for the protection and creation of industrial uses and facilitate opportunities for employment creation'. Public service installations are permissible uses in this zoning category (Appendix 21 of Volume 2 of the Dublin City Development Plan). I am satisfied that the upgrade of the wastewater treatment plant at Ringsend readily fits this category of development.

10.3.24. The area proposed to be used as construction compound C1 is primarily zoned 'Z14' with an objective 'To seek the social, economic and physical development and/or rejuvenation of an area with mixed use of which residential and 'Z6' would be the predominant use'. Public service installations are a permissible use within this zoning category. The remainder of C1 is zoned 'Z9' with an objective 'to preserve, provide

and improve recreational amenity and open space and green networks'. Permissible uses include 'public service installations which would not be detrimental to the amenity of Z9 zoned lands'. It is acknowledged that a note accompanying the Z9 zoning states: - 'Generally, the only new development allowed in these areas, other than the amenity/recreational uses, are those associated with the open space use'. C1 lands recently received permission for use as a temporary compound (ABP Ref: 29N.YM0004, January 2018). In the current development proposal, it is stated that the compound would be maintained in its existing use as a car park facility, storage area and site offices. For clarity, based on an examination of the drawings and aerial photography and site visit, it is evident that the lands which form part of the C1 compound and which are governed by the 'Z9' zoning do not extend into the Irishtown Nature Reserve.

- 10.3.25. The site area proposed to be occupied by construction compound C2 is primarily zoned 'Z7' with a small portion to the east zoned 'Z9'. The temporary use of the portion of the construction compound sites C1 and C2 in this instance would in my view not be detrimental to the planned use of the lands in the longer term.
- 10.3.26. Compound C3 is zoned 'Z14' where public service installations are permissible uses. A small set down area associated with the storm tanks to the north is also zoned 'Z9'. No development is proposed at this location and as stated above, the use of C3 does not form part of the current application.
- 10.3.27. In October 2017, Dublin City Council adopted the Poolbeg West SDZ planning scheme over an area of 34ha immediately adjoining the Ringsend WwTP site to the south and west. At the date of my assessment, following an appeal to the Board, the Planning Scheme (PL29S.ZD2013) is under consideration. The location of the Ringsend WwTP site lies largely outside of this SDZ area. However, the greater part of the C1 construction compound is located within the area of the SDZ on lands which are denoted 'Mixed Use' which includes uses such as commercial, creative industries, industrial (including port related activities). Concerns were raised by elected members of the city council that the use of this section of land as a temporary construction compound for 10 years may effectively sterilise the lands and request that no decision would be taken on the current application until such time as the outcome of the Poolbeg West SDZ application is decided on. Through written

correspondence set out in the Chief Executive's report, Dublin City Council have stated their view that the use of this land as a temporary construction compound would be compatible with the zoning.

- 10.3.28. While I note that 10 years is not a short timeframe, nonetheless, I am satisfied that the use of C1 lands as a construction compound would not conflict with or prevent the eventual delivery of the Poolbeg West SDZ. The DCC SDZ team noted this area shown to be occupied by construction compound C1 is likely to be used for cargo storage in the long term and the use of the lands as temporary storage would be consistent with the zoning. I revisit this point below under consideration of the Dublin Port Masterplan. The Dublin City Council SDZ team also stated that the overall SDZ lands would, to some extent, be dependent on the WWTP upgrade. In addition, they stated their requirement that Irish Water would liaise with Dublin City Council with regard to the delivery of Dublin District Heating requirements, where a backup boiler may be required in the vicinity of C1, to ensure minimal impacts on this project.
- 10.3.29. The planned Eastern Bypass protected corridor runs through the C1 lands. DCC require that the proposals for the use of this land would not interfere with the timely delivery of the Bypass. TII require that no permanent development would occur within the corridor. In response, the applicant stated that no permanent development is in fact proposed in the reserved corridor and that it is the intention to liaise with DCC and the landowner, Dublin Port company, regarding the use of the lands. I have had regard to the study entitled Dublin Eastern Bypass Corridor Protection Study prepared on behalf of NRA/TII in 2014. C1 area is shown within a protected corridor in this study and the delivery of the Eastern Bypass is stated to be a medium to long term objective of the NRA/TII.
- 10.3.30. The duration for the use of the construction compound C1 would be for a temporary period, albeit for up to 10 years and I am satisfied that its location for the construction stage would not jeopardise the eventual delivery of the future Eastern Bypass or form a reason to withhold permission. For similar reasons, I am satisfied that the Dublin District heating system can also be delivered.
- 10.3.31. The Ringsend WwTP site is located c.1km north-east of the Sandymount Village and Environs Architectural Conservation Area (ACA) and given the existing brownfield

nature of the site and the separation distance of the site from the ACA, it would not negatively impact on the architectural conservation status or characteristics of the ACA or of associated policies and objectives. Neither would it be prejudicial to the delivery of the aims set out in the Sandymount Village Architectural Conservation Area report, 2013 or the principles set out in the Village Design Statement, Sandymount, 2011.

10.3.32. Outside of the current Dublin City Development Plan, I have examined the Dublin Port Masterplan 2040 (as reviewed in 2018) prepared by Dublin Port. This is a non-statutory framework document which sets out the intended activities and development options for the Dublin Port area up to 2040. C1 lands lie within the ownership of Dublin Port and are shown planned to provide land capacity for the throughput of a new 600m long container terminal quay further east along the River Liffey in front of the ESB's Poolbeg Power Station. As no permanent development is planned in this area, the expansion of Dublin Port or related port activity development would not be prejudiced.

10.3.33. The proposed development is strongly supported in local planning policy terms and would be generally compatible with the land use zoning objectives assigned to the site. As stated above, the development is pivotal to the realisation of multiple policies and objectives relating to the development and sustainable growth of the city and surrounding region in addition to the protection of the environment.

10.3.34. **Local Planning Policy - RBSF**

10.3.35. At a local level, FCC, through its development plan sets out its strategic policy to 'work with Irish Water to secure timely provision of water supply and drainage infrastructure necessary to end polluting discharges to waterbodies, comply with existing licences and Irish and EU law, and facilitate the sustainable development of the County and the Region'. Objective WT03 of the Plan seeks 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 GDSDS.

10.3.36. The proposed RBSF would lie on lands zoned 'HI' – Heavy Industry, the objective of which is: - 'Provide for heavy industry'. 'A Waste Disposal and Recovery facility (High

Impact)' is a permissible use within this zoning designation. The RBSF can readily be considered as aligning with the land use zoning objective. Objective WM15 supports the provision of facilities for the safe and sustainable management of sludges. Local Objective 78 (development of infrastructure for waste management), attributed to the site, also supports the development proposal.

10.3.37. The RBSF site falls within the Outer Airport Noise Zone and outside the Inner Airport Noise Zone. It falls outside the Outer Public Safety Zone and is therefore also outside the Inner Public Safety Zone. It also falls outside the flight path to the existing east-west runway. Given the modest nature of the development, I am satisfied that it can proceed without conflicting with aviation objectives including Objective DA10 (restrict inappropriate development which would give rise to conflicts with aircraft movements).

10.3.38. Overall, I am satisfied that the RBSF would form a key element of the overall proposal for which development is sought and is strongly supported by local planning policy.

10.4. **Seveso Considerations**

10.4.1. **Ringsend WwTP**

10.4.2. The existing Ringsend WwTP is not an establishment within the meaning of the Directive 2012/18 EU ("Seveso III") which was transposed into Irish law under the European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (COMAH Regulations). However, there are seven 'Upper Tier' Seveso establishments within the general vicinity of the plant, including Dublin Waste to Energy Ltd. facility and the National Oil Reserves Agency facilities. There are also eight 'Lower Tier' Seveso Establishments within the vicinity including two proximate to Ringsend WwTP including Synergen Power Plant and ESB Poolbeg Power Station both which are sited along Pigeon House Road. The existing relationships between the Ringsend WwTP and the Seveso establishments would not change as a result of the development.

10.4.3. As the competent Authority, the HSA were consulted in relation to the Seveso establishments within the consultation distance which is set at 300m from Seveso

sites most proximate to the Ringsend WwTP. Specifically, the HSA was a consultee during the EIA scoping stage and as part of the statutory public consultation in which they were provided a copy of the planning application documentation. No response was received from the HSA and accordingly it can be concluded that the authority does not object to the Ringsend WwTP component in the context of the Seveso Directive. I am satisfied that the Seveso / COMAH context is well understood and would not constitute a reason to withhold permission.

10.4.4. **RBSF**

10.4.5. There are four 'Upper Tier' establishments and four 'Lower Tier' establishments in Fingal. The proposed site for the RBSF is within the Seveso consultation distance (300m) for the Huntstown Power Station, a 'Lower Tier' establishment for the purposes of the Seveso Directive. Specifically, the northern perimeter of the Huntstown Power Station is located approximately 100m from the southern boundary of the proposed RBSF site. The structures themselves would lie just outside of the 300m consultation distance.

10.4.6. As stated above, the HSA were consulted during the scoping stage of the EIA process and during the SID planning application process and as no response was received, it can be concluded that the HSA do not object to the RBSF component of the proposed development.

10.4.7. For similar reasons outlined under my consideration of the Ringsend WwTP, I am satisfied that the Seveso context is well understood and should not form a reason to withhold permission for the RBSF component.

10.5. **Flood Risk**

10.5.1. **Ringsend WwTP**

10.5.2. The application was accompanied by a Flood Risk Assessment (FRA) which followed the methodology laid down in 'The Planning System and Flood Risk Management' (FRA) Guidelines for Planning Authorities 2009 (DoEHLG and OPW). The FRA Guidelines refers to Draft Flood Risk Management Plans (FRMPs). More recently, the OPW has developed a new website (www.floodinfo.ie) which provides

access to plans and maps focussing on areas of significant risk throughout the county.

- 10.5.3. Based on the mapping information on the above website, the proposed development site including the site compounds lie outside of the 0.1% fluvial Annual Exceedance Probability (AEP)⁴ event and is therefore located within Fluvial Flood Zone C where risk of flooding is considered to be low.
- 10.5.4. The portion of the site where the primary development is proposed lies outside of the 0.1% Tidal AEP event and is therefore located within Coastal Flood Zone C, with a corresponding low risk of flooding. By reference to the matrix of vulnerability versus Flood Zone (Table 3.2 of the FRA Guidelines), the proposed WwTP development, considered to be a highly vulnerable development, is deemed appropriate in an area categorised as 'Flood Zone C'. The northern portion of the site which contains the storm water tanks lies partially within the 0.1% and 0.5% Tidal AEP flood event, however, I note that there is no development proposed as part of this current application at this location. Site Compound C2 lies within the 0.1% AEP tidal event and is therefore within Coastal Flood Zone B. Referring to the vulnerability matrix, and noting that the construction compound development is classified as less vulnerable, this type of development is appropriate in Flood Zone B.
- 10.5.5. As shown on a map entitled Dublin City – Pluvial Flood Extent Map, dated August 2016, (www.floodinfo.ie), Pluvial Flooding is associated with the site. The Dublin City Strategic Flood Risk Assessment (SFRA) Pluvial Flood Hazard Map indicates the site has for the most part a low flood hazard. Pluvial flood risk is therefore not considered to be significant. I note that the site is by its nature, a brownfield site and it is not intended to have add any significant additional impermeable area and surface water is proposed to be managed by appropriate SuDS measures. Therefore, no significant additional surface water runoff is likely. Any build-up of groundwater would discharge to the drainage system or to Dublin Bay, therefore

⁴ The term 'Annual Exceedance Probability' or 'AEP' is used to describe the probability of a flood event of this severity, or greater, occurring in any given year. A 0.1% AEP flood event has a 0.1% or 1 in a 1000 chance of occurring in any given year. A 0.5% AEP flood event has a 0.5% or (1 in 200) chance of occurring in any given year.

groundwater risk is not considered to be significant.

- 10.5.6. The design finished floor levels (FFLs) of +4.46m OD would cater for future flood risk including an allowance for climate change and freeboard. Some existing buildings would have FFLs below the +4.46 OD design level, however, I am satisfied that it is not a requirement to retrospectively apply this level to existing buildings, particularly as the site is in Flood Zone C where a low risk of flood occurrence is expected.
- 10.5.7. I note the applicant's point that development proposed for the construction stage (i.e. compound areas) should be set above the 0.5% AEP current scenario of +3.11m OD given the duration of the construction stage would be deemed short term in the context of climate change. This is reasonable.
- 10.5.8. Overall, I am satisfied that following assessment, it has been demonstrated that subject to commitments around FFLs and SuDS measures, the Ringsend WwTP component would not have any noticeable impact on the existing flood regime.
- 10.5.9. **RBSF**
- 10.5.10. The RBSF site is not covered in the flood maps produced under the CFRAM study to date. The PFRA flood extent map and Fingal County Council Strategic Flood Risk Assessment flood zone map both indicate that the existing site lies outside of the 1% and 0.1% AEP fluvial flood extents and as such it can be considered as within Flood Zone C where the probability of flooding is lowest. Based on the Matrix of Vulnerability versus Flood Zone set out in the aforementioned guidelines, 'highly vulnerable development including essential infrastructure' is considered appropriate in a site categorised as 'Flood Zone C' and while the RBSF is categorised as a highly vulnerable development, no justification test is required to be applied.
- 10.5.11. Groundwater risk is not considered to be significant as there is no historical evidence of groundwater flooding at the site and the available PFRA map indicates that no groundwater flood risk exists near the proposed development site.
- 10.5.12. OPW do not have historical records of any previous flood related occurrences at the site (www.floodmaps.ie). One such occurrence has been recorded just north of the site at Kilshane cross in November 2002 stated to be as a result of surface water

runoff. A report from FCC in 2005 identified that drainage works were undertaken to alleviate any flooding issues.

10.5.13. The available Preliminary Flood Risk Assessment (PFRA) maps indicate pluvial flood risk associated with an area of the site, predominately along the south east /east boundary. The drainage design is stated to include attenuation and SuDS measures sufficient to ensure there would be no increase in the risk of pluvial flooding as a result of the development at this site.

10.5.14. Overall, I am satisfied that the risk of flooding has been adequately addressed in respect of the RBSF site and it can be concluded that no increased risk of flooding is likely to result because of the development.

10.6. **Traffic**

10.6.1. **Ringsend WwTP**

10.6.2. The applicant's EIAR (Volume 3) sets out its consideration of traffic under Section 13. I deal with this issue of traffic below as part of my planning assessment. Separately I have considered the road network as a material asset within the EIA section of this report. In terms of assessing traffic, the methodology used by the applicant is based on published guidance as referenced in Section 13.10 of the EIAR, primarily TII 'Traffic and Transport Assessment Guidelines' May 2014. Criteria used in the assessment of traffic include Ratio of Flow to Capacity (RFC), queue delay and maximum queue length.

10.6.3. The extent of the study area determined by the applicant was agreed in consultation with Dublin City Council's Road and Traffic Department and includes nine sections of roads which are illustrated in Figure 13-1 of Section 13 of the EIAR – Volume 3.

10.6.4. Overall the site is well served in terms of road infrastructure and the surrounding road network currently accommodates large volumes of traffic. It is served by local roads including Pigeon House road, Whitebank road and South Bank road. South Bank road connects with the R131 regional road at a roundabout intersection with the Seán Moore road. The R131 then continues northwards across the East Link toll bridge and connects with the North Quays port tunnel and M50.

- 10.6.5. There are five existing access points serving the WwTP site, including three located off Pigeon House road. These are intended to continue in use as part of the current proposals. An entrance c.250m east of the main site entrance which it is stated was used in 2005 during construction at the site is proposed to be re-opened and used as an entrance for both construction and operational phases. A new temporary pedestrian access is also proposed from construction compound C1.
- 10.6.6. It is anticipated that there would be 240 HGV trips daily and 396 cars/light vehicles during 2020 peak construction year with approximately one third of the HGV trips occurring during night-time. During the operation of the proposed WwTP component, an increase in HGV trips from the current average of 22 to 100 trips per day, comprising 50 deliveries and 50 departures are anticipated to result.
- 10.6.7. Traffic count surveys were carried out at seven locations along the surrounding road network and information gathered from these surveys was used to ascertain the 2017 AM and PM peak baseline situation which in turn fed into traffic modelling. Baseline Annual Average Daily Traffic (AADT) flows for the surrounding roads are presented in Table 13-9 within Section 13 (Traffic) of the EIAR (Volume 3).
- 10.6.8. The Point Depot junction, Seán Moore junction and Whitebank junctions were examined for 2020 (peak construction) and 2027 (final year of construction) in both the 'with' and 'without' development scenarios. Dublin City Council intend to upgrade The Point Depot junction to a signalised junction by 2020, however it was examined in its current configuration in the 2020 scenario which it is suggested gives a more conservative assessment. In the analysis, it was assumed that the planned Point Depot Improvement scheme would be complete by 2028. It was also assumed that the Poolbeg SDZ would be in place in 2028. Traffic analysis also considered the impacts on the road network in the 2028 (Year of opening) and 2035 (Design year).
- 10.6.9. Overall it is submitted that the proposed WwTP component would result in a slight negative short-term impact during 2020 peak construction year and 2028 final year of construction. It is also predicted that the slight negative long-term impacts would arise during the 2028 year of opening and 2025 design years.
- 10.6.10. It is submitted that as the Ringsend WwTP itself is located off the public road network, it would have an imperceptible impact on road safety during the

construction or operational phases. Noting the increase in traffic which would result, in particular the increase in number of HGV trips to and from the site, in the absence of mitigation, I consider the impact on road safety would result in a 'slight' impact.

- 10.6.11. Mitigation measures proposed include the preparation of a traffic management plan, adherence to good traffic management and adopting best practice during the construction phase. The HGV cordon which operates in the city centre would prohibit HGV traffic associated with the development entering the city centre and therefore all traffic from the site would be required to access the M50 via the Port Tunnel. An application for an Abnormal Load permit would be a requirement and abnormal load movements are stated to be limited to evening and night periods in order to minimise traffic disruption and delays during business hours. No mitigation is considered necessary or proposed during the operational phase.
- 10.6.12. Notwithstanding the mitigation measures proposed, residual impacts are anticipated to the traffic flows on the adjoining road network resulting in a slight negative long-term residual impact during the 2020 peak construction year and 2028 final year of construction in AM and PM periods. Residual traffic impacts have also been assessed as resulting in a slight negative long-term impact in the AM and PM periods during operation including 2028 year of opening and 2035 design year.
- 10.6.13. Post mitigation, no negative residual impacts are predicted on the safety of the road network as a result of construction or operation of the WwTP component.
- 10.6.14. The Roads and Transport Division of DCC have examined the proposals and stated their satisfaction with the substance and level of detail submitted as part of the EIAR. No objection was raised regarding the access arrangements including proposals to use a previously permitted temporary access off Pigeon House road on a permanent basis. DCC require that no local roads would be used as part of the haul route. Overall, the Roads and Traffic Division have expressed their support for the proposal.
- 10.6.15. Traffic flow and vehicle queue lengths at the Seán Moore Junction and the Point Depot junction are proposed to be monitored as part of the Traffic Management Plan and restrictions are proposed to be put in place on the movement of construction related traffic if deemed necessary by DCC and/or An Garda Síochána.

10.6.16. Based on the information contained in the EIAR, which I consider represents a realistic analysis of the traffic likely to be generated, I am satisfied that the proposed development would give rise to slight negative short term (construction) impacts and long term (operation) traffic impacts. These relate to traffic flow, capacity and vehicle queues. Given the benefits for the delivery of improved wastewater treatment, slight negative impacts are not unacceptable and would not constitute reasonable grounds for refusal. While road safety is always a priority, it is reasonable to conclude that once the traffic management plan is implemented and noting that all road users including those travelling to and from the site would be required to adhere to road safety legislation, no unacceptable impact on road safety is likely to arise during construction or operation as a result of the proposed development. It is important to note that because the proposal no longer requires the construction of the tunnel element, the volume of HGVs would significantly reduce during construction. An estimated 70,000 HGV movements carrying spoil and rock from the tunnel site over an 18-month period are no longer required. The elimination of these tunnel related trips would be significantly positive on traffic and the surrounding road network.

10.6.17. **RBSF**

10.6.18. The R135 regional road lies to the east of the RBSF site and provides access to the site. The regional road connects with Kilshane cross north of the site and the N2 is located to the east of the R135. The site is located c. 1.6km north of the M50 Junction 5 and lies c.1.5 km west of Dublin airport.

10.6.19. Access to the site is currently provided via an existing entrance off the R135. Visibility available is above 90m in each direction which is the desirable minimum sight distance for a road with a 60 kph speed limit. The access would be upgraded and the details would be agreed with the Transportation Department of FCC.

10.6.20. It is anticipated that the proposed RBSF component would be constructed over two phases in 2020-2021 and 2024-2025. The assessment assumes that all the surrounding lands comprising 182 ha zoned for warehousing and distribution and general employment would be developed by 2040 with associated increase in traffic volumes. Results of traffic surveys undertaken at five locations are presented in Section 13 (Traffic) of the EIAR – Volume 4. AADT flows were derived based on

traffic count data obtained from these surveys.

- 10.6.21. Traffic analysis focused on 2020 (Phase 1 construction year) and 2024 (Phase 2 construction year). Kilshane Cross, R135 Signalised junction, Elm Road Roundabout junction and N2 Northbound Slip Road were examined in 2020 and 2024 in both the 'with' and 'without' project scenarios.
- 10.6.22. It is anticipated that there would be 25 HGVs arrivals and departures and 70 cars/light vehicles arrival and departures daily during each of 2020 and 2024 construction years. In 2024 there are also 30 HGVs and 10 cars/light vehicles predicted to arrive and depart the site associated with the operation of the facility. In 2040, 70 HGV arrivals and departures and 10 car/light vehicle arrivals and departures daily are predicted to arise during operation.
- 10.6.23. Based on the assessment of RFC and associated queue delay and queuing length, it has been assessed that the proposed RBSF component would likely result in a slight-negative short-term impact during the 2020 and 2024 construction years at AM and PM peak periods. Post construction, the proposed RBSF would result in an imperceptible negative long-term impact in both the AM and PM peak hours.
- 10.6.24. In the 2020 and 2024 construction years and in the 2025 (year of opening) and 2040 (design year) scenarios, Kilshane Cross is anticipated to operate above the design threshold and theoretical capacity in both the AM and PM scenarios. The N2 northbound slip road junction would be approaching usual design thresholds in AM and PM scenario 'without' project and marginally above the usual design threshold 'with' project scenario. However, in comparing the 'with' and 'without' project scenario, only marginal reductions in capacity and increase in queue lengths at these junctions are anticipated as a result of the project.
- 10.6.25. It is assessed that the proposed development would cause an imperceptible impact on road safety during the construction or operational phases. Noting the increase in traffic which would result in increased vehicular and HGV movements in and out of the site, I am of the opinion that, in the absence of mitigation, the impact on road safety during construction would be rated as 'slight' reducing to 'imperceptible' during operation.

- 10.6.26. Mitigation measures proposed include the preparation of a traffic management plan and adherence to good traffic management and best practice during the construction phase. An application is proposed to be made for Abnormal Load permit and abnormal load movements would be restricted to evening and night to minimise disruption to traffic during business hours. No mitigation is considered necessary or proposed during the operational phase.
- 10.6.27. Post mitigation and based on the assessment of RFC, queue delay and queue length it has been determined that the proposed RBSF component would likely result in a slight negative long-term residual impact during the construction phase and an imperceptible negative long-term residual impact during the operational phase.
- 10.6.28. No residual impacts to the safety of the road network are anticipated as a result of the construction or operational phases of the Proposed RBSF Component. Similar to my considerations of the Ringsend WwTP, while road safety is always a priority, it is reasonable to conclude that once the traffic management plan is in place and noting that all road users including those travelling to and from the site would be required to adhere to workplace safety and road safety legislation, no residual impact on road safety is likely to arise during construction or operation phases as a result of the proposed development.
- 10.6.29. Traffic flow and vehicle queue lengths at the N2 Northbound slip road Junction are proposed to be monitored as part of the detailed traffic management process and restrictions would be placed on the movement of construction related traffic if deemed necessary by FCC and/or An Garda Síochána.
- 10.6.30. FCC's Transport Department was generally satisfied with the proposal subject to conditions including the attachment of a special contribution to improve the upgrade of the R135 and N2 north bound slip priority junction to a signalised junction.
- 10.6.31. **Concluding Comments on Traffic**
- 10.6.32. Having regard to the information contained in the EIAR and the wider application documents, in respect of the Ringsend WwTP or RBSF components, I am satisfied that the proposed development would not give rise to levels of traffic which would result in unacceptable congestion on the strategic road network or compromise road

safety for road users.

10.7. Design and Amenity

10.7.1. Ringsend WwTP

10.7.2. In relation to the Ringsend WwTP component, it is stated to have been designed to reflect the function of the WwTP within an established industrial / utility area. Some elements would undoubtedly be prominent when viewed outside of the site, however, given their location in an established industrial site and the adjoining area which is characterised by industrial development, views of additional structures can be readily assimilated into an industrial/utility context. Landscape and visual impacts are considered in further detail in assessing significant effects on the environment in which it is concluded that post mitigation, the landscape and visual impact resulting from the proposed development would be imperceptible and acceptable.

10.7.3. DCC have expressed some concern with the proposal to use C1 and C2 construction compounds for up to 10 years and considers that this might give rise to impacts to heritage and visual amenity. To that end, DCC considers their use should directly relate to the construction phase and decommissioning should follow in a short timeframe thereafter. In response, the applicant states that the duration of the use of the compounds would be limited to the construction phase and the decommissioning would occur at that point. DCC Parks and Landscape Services Division were generally satisfied with landscape proposals including site perimeter planting to assist in screening the development and recommends further planting along the southern boundary. The Division also seek the removal of temporary works and full restoration of these areas. I am satisfied that this matter can be dealt with by attachment of an appropriate planning condition.

10.7.4. Given that the closest residential dwelling is c.950m away from the Ringsend WwTP and houses proposed on the Poolbeg West SDZ would be separated c.975m, no direct impacts on residential amenity arise. In the longer term, the proposed development would result in enhanced water quality which would be of significant benefit to the amenities of the area including bathers and those who are actively involved in water sports in the Bay.

- 10.7.5. Overall, having regard to the above and subject to appropriate conditions around noise, odour and landscaping, it is clear that the benefits associated with the development over the long-term would far outweigh any temporary adverse impact on the amenities of the area and as such any impact on the amenities would not constitute reasonable grounds for refusal in my opinion. Impacts on other related environmental factors are dealt with in the EIA section of this report and traffic impacts are dealt with above under the heading of traffic.
- 10.7.6. **RBSF**
- 10.7.7. The rationale for the architectural design of the RBSF is set out in an 'Architectural Concept Statement' which was included with the application. Each of the two storage buildings are proposed to be 105m long and 50m wide internally and would be laid out in bays to facilitate segregation of material. As presented, the buildings would read as typical industrial steel framed structures finished with insulated metal cladding panels, grey and silver in colour. The design incorporates a curved roof which gives a lighter ridge line and a more sympathetic visual presence. The RBSF building design is stated to also have been informed by fire safety requirements. A PV solar array of 1,545 square metres is proposed to be placed on one of the buildings which is stated would contribute upwards of 40% of the sites annual energy load by means of renewable solar energy.
- 10.7.8. The administration and welfare building is presented as a single storey building 10m wide and 13m long with a 4.1m ridge height. Similar to the main buildings proposed, it would also incorporate a curved roof. Its design is complimentary to the main storage buildings. A new substation would be constructed to ESB Networks requirements. A number of smaller structures on site are proposed to be demolished.
- 10.7.9. An odour control system has been incorporated to ensure that odour would not give rise to any nuisance beyond the boundary of the RBSF site. The system would involve extracting air from within the storage buildings on a continuous basis as well as sub-dividing each building into two zones so that they could be independently operated fast-action doors would be fitted to control and minimise the time that these doors would be open. Assessment of odour is given further consideration under the assessment of likely significant effects of the environment below. The preparation of

an Operation Environmental Management Plan (OEMP) is proposed and operations staff would be required to ensure that the conditions attached to the required certificate of registration including those which may relate to odour would be adhered to. DAA require that no organic matter such that would attract bird activity on site would be allowed to be present in the open on the site. It is planned that the biosolids would be stored indoors only and therefore no bird hazard on air safety should arise.

10.7.10. A 'Glint and Glare' assessment concludes that the photovoltaic solar array proposed would not result in any nuisance or hazard effect upon local residences or on routes running through the study area including the N2 and airport approach routes. In this regard, I note that the solar arrays which are proposed to be mounted on the roof of the northern building would be partially screened by the adjacent second storage building. Any glare experienced by road users along the northbound carriageway would be limited, occurring through a gap in the vegetation and which I am satisfied would not result in any safety hazard or similar nuisance to motorists. It is also concluded that any glare predicted for the southbound carriageway of the N2 would fall outside of the field of view of motorists and would not present any nuisance effect. Any glare likely to be experienced on approach paths into Dublin Airport is predicted to be of an intensity within acceptable Federal Aviation Administration (FAA) Irish Aviation Authorities (IAA) standards. Having examined the Glint and Glare assessment, the conclusions which I have highlighted above, I am satisfied that Glint and Glare would not present any adverse impacts overall.

10.7.11. Having regard to the above and subject to appropriate conditions, the development of the RBSF should not be withheld on the grounds of design and amenity.

10.8. **Community Gain**

10.8.1. The issue of community gain has arisen in the consideration of the RBSF component. Meakstown Community Council requested that the applicant would be required to consult with the community council regarding job vacancies and seeks that a community fund would be set up to support facilities or services in the area that would benefit the community.

- 10.8.2. Under section 37G(7)(d) of the Act, the Board can attach a condition requiring the construction or financing (in whole or part) of the construction of a facility or the financing or provision of a service in the area of the development, if they were of the view that it would constitute a substantial gain to the community. In this instance, the overall development comprises alterations and improvements to the existing Ringsend WwTP component and the development of a new RBSF at Newtown. It is the latter component that is of interest to the Meakstown Community Council.
- 10.8.3. Key issues of public concern raised through the applicant's public consultation and open days have been considered in the EIAR and I have considered these environmental topics in my assessment. Post adoption of appropriate mitigation measures, no adverse significant effects are likely to arise on the communities surrounding the RBSF.
- 10.8.4. The applicant has stated their intention to include social clauses as a performance condition of contracts to leverage employment opportunities for the local communities and to work closely with local employment services to fill employment positions. They also set out their intention to provide improvements to the R135 along the road frontage to the RBSF site. Beyond this, no community fund is proposed.
- 10.8.5. Given the nature of the development and measures proposed by the applicant and that no adverse impacts are likely to result on the local communities, I do not recommend the attachment of a community gain condition.

10.9. **Other consents**

- 10.9.1. It is of relevance to note that outside of the assessment of the planning application, both components would require separate consents as appropriate, including but not limited to those listed under.
- In accordance with the requirements of the Waste Water Discharge (Authorisation) Regulations 2007, as amended, (S.I. No 684 of 2007) Ringsend WwTP would be subject to a review of the existing Wastewater Discharge Licence from the EPA. Under this authorisation process the EPA can regulate wastewater discharge to ensure the potential effects on the

receiving water are controlled. In deciding on an application and in the event of a grant of permission, the Board can attach conditions relating to emissions other than those associated with the actual wastewater discharge as beyond controlling wastewater discharge, other emissions do not come within the scope of the Wastewater Discharge Authorisation regulations or the associated licencing regime.

- The RBSF would be subject to regulation by the local authority under the Waste Management (Registration of Sewage Sludge Facility) Regulations 2010. The local authority can issue a certificate of registration (COR) and in doing so can attach conditions on matters concerning types and quantities of sludge to be stored, reception and entry/exist areas, control of odours, integrity of all storage tanks and bays, maintenance and records and requirements concerning environmental pollution. The Waste Permit and the Certificate of Registration database register for waste facility permits and certificates of registration issued by local authorities are held by the National Waste Collection Permit Office (NWCPO).
- Both the Ringsend WwTP and the RBSF components would be required to comply with the requirements set out under the Building Control Acts 1990 - 2007 and the associated Building Control Regulations 1997-2018, including seeking such consents (e.g. Fire Safety certificate and Disability Access certificate) for buildings as may be appropriate.

10.9.2. The information presented with the application states that all of the biosolids generated and stored would be used in agriculture and it is also stated that a certificate of registration is required for the facility. To this end, I note that under Section 51(2) of the Waste Management Act 1996, as amended, a waste licence is not required for the recovery of sludge for use in agriculture. Notwithstanding this, in the event that the facility would require any other consent or waste licence, either now or in the future, this would be a matter for the applicant to ensure such consent is obtained.

10.10. **Conclusion on Planning Assessment**

10.10.1. The benefits of the proposed development are considered to be overwhelmingly positive. It's delivery would assist Ireland in meeting obligations set down under EU Directives, national legislation and planning policy expressed through the hierarchy plans which regulate development at a national, regional and local level. The development would enable sustainable residential and economic growth through the delivery of increased wastewater treatment capacity while protecting the environment through improving the quality of effluent discharged to the receiving water environment. It has been demonstrated in the application that the improvement envisaged in final effluent quality can be achieved at the existing Ringsend Wastewater treatment plant by the incorporation of scientifically proven aerobic granular sludge technology into the treatment process together with associated nitrogen and phosphorous removal. When compared to the previously permitted and proposed long sea outfall (in tunnel) option, the current proposal has significant advantages and would be less intrusive on the receiving environment. The regional biosolids storage facility would assist in meeting the aims of the Sewage Sludge Directive, regulating the use of sewage sludge in agriculture to prevent harmful effects. Outside of matters considered above, environmental impact assessment and appropriate assessment are considered in the following sections of my assessment set out below. Subject to consideration of these matters, it can be concluded that the proposed development is in accordance with the proper planning and sustainable development of the area.

11.0 **Environmental Impact Assessment**

11.1. **Introduction**

11.1.1. This section of the report comprises an assessment of the likely significant effects of the overall project, referred to by the applicant as the 'proposed upgrade project' which includes the proposed development which is the subject matter of the current SID application in combination with the elements of the 2012 Approval which are also being progressed. A number of the matters to be considered have already been addressed in the Planning Assessment above. This section of the report should therefore be read, where necessary, in conjunction with the relevant sections of the

Planning Assessment. As the application is being made under Section 37E of the Act, it is required to be accompanied by an environmental impact assessment report. With a design capacity for 2.4 million PE, it also falls within and exceeds the thresholds (150,000 PE) of Class 13 of Part 1 of the fifth schedule of the regulations.

11.1.2. The application was submitted after 16th May 2017, the date for transposition of Directive 2014/52/EU amending the 2011 EIA Directive. The application is therefore supported by an EIAR. The Directive was transposed into Irish legislation on September 1st of 2018 under the European Union (Planning and Development) (Environmental Impact Assessment) Regulations, 2018, after the application was received.

11.1.3. The Department of Housing, Planning and Local Government (DHPLG) issued Guidelines entitled – Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018). These provide guidance in relation to various sections of the Act arising from the transposition of the Directive. I have noted the above and I have also had regard to other guidance documents including: Draft Guidelines on the information to be contained in Environmental Impact Assessment Reports, EPA and European Commission guidance documents on the implementation of the EIA Directive (Directive 2011/92/EU as amended by 2014/52/EU) and also the Board's internal guidance on EIA.

11.2. **Compliance with Legislation**

11.2.1. The EIAR addresses the overall 'proposed upgrade project', which as I have outlined above is meant to include elements of the previous 2012 Approval being progressed together with the development for which permission is currently sought and which includes both the WwTP component at Ringsend and the RBSF at Newtown.

11.2.2. It comprises five volumes, grouped as follows:

- Volume 1: EIAR Non-Technical Summary,
- Volume 2: Introduction (Part A – Report and Part B – Appendices),

- Volume 3: Ringsend Wastewater Treatment Plant (Part A: Report and Part B: Appendices),
- Volume 4: Regional Biosolids Storage Facility (Part A: Report and Part B: Appendices),
- Drawings (Part A: Ringsend Wastewater Treatment Plant Upgrade and Part B: Regional Biosolids Storage Facility).

11.2.3. In total, each of Volumes 3 and 4 of the EIAR contains 19 chapters which are entitled 'Sections'.

11.2.4. As is required under Article 3(1) of the EIA Directive, the EIAR identifies, describes and assesses in an appropriate manner, the direct and indirect significant effects of the project on the following environmental factors: (a) population and human health; (b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; (c) land, soil, water, air and climate; (d) material assets, cultural heritage and the landscape and it equally considers the interaction between the factors referred to in points (a) to (d).

11.2.5. In accordance with Article 5 and Annex IV, the EIAR provides a description of the project comprising information on the site, design, size, characteristics and other relevant features of the project. It also provides a description of the likely significant effects of the project on the environment and a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment.

11.2.6. The EIAR includes a non-technical summary of the information referred to in Article 5 (a) to (d) and additional information specified in Annex IV relevant to the specific characteristics of the overall project and project type and to the environmental features likely to be affected. In this regard, the EIAR provides a description of the evidence used to identify and assess the significant effects on the environment. The EIAR provides an adequate description of forecasting methods/ evidence used to identify and assess the significant effects on the environment. Any difficulties which were encountered in compiling the required information are set out under the respective environmental topics which were individually assessed.

- 11.2.7. The features of the project and/or mitigation measures envisaged to avoid or prevent what might otherwise be significant adverse effects on the environment are set out under each environmental topic considered. The potential impacts and mitigation measures are summarised under Section 17 and a summary of residual impacts is set out within Section 18 of Volumes 3 (Ringsend WwTP) and 4 (RBSF) of the EIAR. Where proposed, monitoring arrangements are also outlined. Environmental interactions and cumulative impacts are also addressed. Consultation undertaken by the applicant meets with the statutory requirements listed under Article 6 of the EIA Directive.
- 11.2.8. I am satisfied that the information provided in the EIAR is sufficiently complete and up to date. It is of a high level of quality, containing comprehensive studies and scientific analyses which are evidently prepared by qualified and competent experts. In this regard, I note that the qualifications and expertise listed and demonstrated by the experts involved in the preparation of the EIAR. I am also satisfied that the participation of the public has been effective and the application has been made accessible to the public by electronic and hard copy means with adequate timelines afforded for submissions.
- 11.2.9. My assessment is based on the information provided by the applicant, including the EIAR, the reports and submissions made in the course of the application by Planning Authorities, prescribed bodies and observers and the applicant's response to reports and submissions.

11.3. **Alternatives**

- 11.3.1. Alternatives which were studied are addressed within Volume 2 of the EIAR in respect to both project components. In respect of the Ringsend WwTP proposals, it is outlined that the GDSDS recommended the Ringsend WwTP should be maximised within the confines of its current location and that a new wastewater treatment facility would be sited in north County Dublin (the Greater Dublin Drainage Project). It also references that the GDSDS was the subject of a Strategic Environmental Assessment (SEA) and that the process considered a comprehensive assessment of alternative locations for the additional wastewater treatment required for the region and concluded that the Ringsend WwTP was the optimum location. In

addition, the current EIA considered alternative technologies which could potentially be employed. These include the following:

1. Sequencing Batch Reactors (SBR) and Capacity Upgrade (SBR + CU) continuing to use the Long Sea Outfall Tunnel (LSOT);
2. Deep Shaft Aeration (DSA) with SBR discharging to the Lower Liffey Estuary;
3. Integrated Fixed-Film Activated Sludge (IFAS) discharging to the Lower Liffey Estuary;
4. Membrane Bioreactor (MBR) discharging to the Lower Liffey Estuary and;
5. Aerated Granular Sludge (AGS) discharging to the Lower Liffey Estuary.

11.3.2. The options were scored against 15 parameters following which a conclusion was reached that the preferred option based on technical, environmental and cost grounds would be the use of AGS treatment on site to improve effluent quality discharging into the Lower Liffey Estuary at its existing outfall. A comparison was then presented between the AGS and LSOT (permitted under the 2012 Approval) options and the AGS option was considered as being more favourable at the end of the process.

11.3.3. In relation to the RBSF, five alternative locations were shortlisted and assessed against four criteria (Environmental, Economic & Engineering, Planning and Social & Community). At the end of this process, the current site at Newtown emerged as the preferred site.

11.3.4. For both the Ringsend WwTP and the RBSF components, the 'do-nothing' option was also considered and ruled out as not being a suitable option in each case.

11.3.5. Overall, a description of the reasonable alternatives studied by the developer, which are relevant to the proposed project and its specific characteristics have been clearly presented, together with an indication of the main reasons for selecting the chosen option for each of the Ringsend WwTP and RBSF components, taking into account the effects on the environment.

11.4. **Conclusion on EIAR Compliance with Legislation**

- 11.4.1. I am satisfied that the information provided in the EIAR is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the development on the environment, taking into account current knowledge and methods of assessment to be incorporated into its decision on the planning application. I am also satisfied that the information contained in the EIAR complies with the provisions of Article 3, 5 and Annex (IV) of EU Directive 2014/52/EU amending Directive 2011/92/EU.

12.0 **Likely Significant Effects on the Environment**

12.1. **Introduction**

- 12.1.1. In this section of my assessment, I consider the direct and indirect significant effects of the development against the factors set out under Article 3(1) of the EIA Directive 2014/52/EU, which include:

- a) population and human health;
- b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC;
- c) land, soil, water, air and climate;
- d) material assets, cultural heritage and the landscape;
- e) the interaction between the factors referred to in points (a) to (d).

- 12.1.2. My assessment is structured to follow items (a) to (e) directly above in respect of each of the two project components. I have dealt with noise and odour under the heading of c) land, soil, water, air and climate. I have considered all of the documentation lodged with the EIAR and all of the documents and drawings on the planning application file, including written submissions.

12.2. **Population and Human Health**

12.2.1. **Population and Human Health – Ringsend WwTP component**

Introduction and Existing Environment

- 12.2.2. In terms of population, the EIAR provides details of the resident population, working

population and the visiting community, including recreational amenities. The local area comprising electoral divisions Pembroke East A, Pembroke East B and Pembroke East C is identified as the area which would be most likely to experience local impacts arising from the Proposed WwTP component.

- 12.2.3. The closest residential dwellings are located c. 950m to the south-west of the proposed WwTP, along Beach road/Strand road. Dwellings are also located c.975m west of this site along Pigeon House road. Poolbeg West, located to the south west of the Ringsend WwTP site, has been designated as a Strategic Development Zone (SDZ), which is earmarked to deliver approximately 3,500 homes and other commercial and mixed uses.
- 12.2.4. In terms of the working population, employment is concentrated in Dublin city centre, which forms a large proportion of the c.750,000 working population in the GDA as a whole. According to the 16th Issue of Dublin Economic Monitor published in February 2019, the latest unemployment figures for Dublin is 5.3% (Q4 2018). The unemployment rate for the State is 5.3% (CSO Jan 2019). The Ringsend WwTP facility currently provides employment for c. 40 full time employees.
- 12.2.5. Regarding the visiting population, there are multiple visitor attractions and leisure and recreational amenities, sporting facilities and clubs, recreational walks, parks and hotels, bars and restaurants in the local and regional area. The local coastal walkway extends from the Merrion Gates to the Great South Wall. The Aviva stadium, hosting sporting and other events is located c. 2km to the south west of the site. Under the Quality of Bathing Waters Regulations 2008, as amended, four stretches of Beach (Dollymount Strand, Sandymount Strand, Merrion Strand and Seapoint) have been designated as bathing waters and are used as a recreational amenity by the local and visiting population.
- 12.2.6. The EIAR provides information on the general Health Status of persons from the CSO 2016 census across local EDs (Pembroke East A, Pembroke East B and Pembroke C). Sensitive receptors within the local area are identified as including: Irishtown Health Centre, St. Patrick's Boys National School, Cambridge Road, St. Patrick's Girls National School, Ringsend College / Coláiste na Rinne and Ringsend Community Centre, all of which are located in the Dublin 4 area.

Potential Impacts

- 12.2.7. The assessment concludes that the proposed Ringsend WwTP component would not give rise to significant adverse effects on the local or wider population. If permitted and implemented, the development would give rise to employment for c.150 construction workers (at peak) and 15 new employment positions during operation, resulting in positive impacts through economic benefits. Once complete and operational, the Ringsend WwTP would have increased capacity for wastewater treatment and would be pivotal in supporting planned residential growth aligned with the growth of the economy in Dublin city and region which it serves.
- 12.2.8. In considering human health impacts, the DPHLG guidance states that the 'notion of human health should be considered in the context of other factors in Article 3(1) of the EIA Directive'. The delivery of the Ringsend WwTP upgrade would result in a higher standard of wastewater treatment. Effluent discharged to Dublin bay would comply with the Water Framework Directive (WFD), the Urban Waste Water Treatment Directive (UWWTD) and the Bathing Water Directive (BWD).
- 12.2.9. Slight adverse impacts are predicted to arise because of an increase in traffic on the road network during the construction and operation phases. Further details on traffic impacts including road safety are considered under the heading of Traffic, as set out under the Planning Assessment section of this report.
- 12.2.10. Concerns were raised regarding human health during the applicant's initial consultation with the public prior to lodging the application. Potential impacts identified include concerns that pollution might cause a deterioration in water quality. It is of relevance to note that Dublin Bay waters are not used as a resource for drinking water, but parts of the bay are used as a recreation area for swimming and other activities and it is stated that the bay is a resource for fish and shellfish intended for human consumption. It is stated under Section 5.5.3.1 of Volume 3 of the EIAR that no shellfish are collected within the inner part of Dublin Bay. It has been determined in the assessment of the water environment that, for the most part, the construction phase would not result in impacts on designated bathing waters and as such would not give rise to effects on human health. It is acknowledged however that there would be a deterioration of bathing water quality in 2019/2020, due to

decommissioning of aspects of the WwTP in advance of new phases being added. As is stated in the EIAR, this would lead to a 'slight' negative indirect impact for the bathing population and others undertaking water-based activities, removing their enjoyment and use of this amenity for the stated period. While accepting this impact would be short term in duration, I would be more inclined to conclude that this impact would be 'moderate' rather than 'slight' in terms of significance for the community that use the bay for recreation. This is particularly so as it is stated in the EIAR under the heading of Population and Human Health that the impact would be largely dependent on overall water quality in the area at the time and whether the current bathing restrictions in place would continue to remain in place over that time.

- 12.2.11. Concerns have also been raised during the course of the application concerning impacts on air quality and dust, noise, odour, traffic and impacts as a result of rodents (as potential vectors of disease), management of sludge and safe disposal of hazardous material. These impacts have been considered in detail in the EIAR by the appropriate specialists, which I deal with under the assessment of the respective environmental factors. However, insofar as they relate to human health, I have considered the mitigation measures proposed and residual impacts likely to arise post implementation of mitigation, as set out below.

Mitigation Measures

- 12.2.12. There are no specific mitigation measures proposed in relation to population or human health during construction or operational phases beyond those proposed to address other environmental impacts. The overarching design measures proposed for the construction stage centre around the preparation and adherence to the CEMP and a traffic management plan.
- 12.2.13. Regarding deterioration in water quality during the period of decommissioning of aspects of the WwTP, these works are proposed to be carried out during the winter of 2019/2020 when recreational swimmers and water based sports activities are at seasonally low levels and as set out in Section 4 of the EIAR, this impact is not anticipated to result in an overall deterioration in bathing water quality at the designated bathing areas.
- 12.2.14. Dust would be controlled by applying the German air pollution control limit, known as

the TA Luft limit of 350 mg/m²/day (averaged over a one-year period) for receptors outside the site boundary. At this level, no unacceptable dust that would give rise to adverse impact on population or human health or on the enjoyment of amenities in the vicinity of the proposed WwTP component are anticipated.

- 12.2.15. Air quality dispersion modelling found that during the construction phase, there would be no impact greater than imperceptible for receptors as a result of traffic emissions and, as such, there is no likelihood of adverse effects on human health in this regard.
- 12.2.16. The noise and vibration assessment concludes that once best practice measures are employed during construction and operation, noise and vibration generated would fall within acceptable limits.
- 12.2.17. Regarding odour, it is intended that the predicted odour concentrations at all areas of long-term public exposure and potential areas of future residential use, including the Poolbeg West SDZ, would be below the adopted odour criterion of 3 ou_E/m³ as the 98th percentile (hourly average) limit and hence no negative impacts are predicted on population or human health from odour as a result of the proposed development at Ringsend WwTP component. During construction, this criteria of 3 ou_E/m³ would be met apart from where there is the temporary shut-down of existing odour control units to facilitate new connections, though during this time, no perceptible change in odour concentrations outside of the site is predicted.
- 12.2.18. With the implementation of good traffic management, apart from slight impacts due to traffic delays, no adverse effects on population or human health are likely to arise as a result of traffic during the construction or operational phases. It is proposed that the local community would be kept informed of developments, including any traffic diversions, through a dedicated point of contact.
- 12.2.19. A rodent and pest control plan is proposed to be prepared and implemented to prevent impacts that could occur from the spread of pathogens from rodents that might be disturbed during construction.
- 12.2.20. Hazardous materials that may be encountered would be required to be handled and appropriately governed by comprehensive waste management legislation. This is

dealt with in greater detail under the heading of Land and Soils in this assessment.

- 12.2.21. Sludge generated would be treated at the existing facility to form biosolids and the biosolids would be transported to the RBSF for storage prior to its use as a fertiliser on land. I revisit this matter in greater detail as part of my assessment of the RBSF component.

Residual Impacts

- 12.2.22. It is clear that residual impacts on population and human health would be broadly positive as a result of providing improved wastewater treatment quality and an increase in capacity to cater for sustainable residential and economic growth, as well as safeguarding health and the environment.
- 12.2.23. During construction, there would inevitably be some nuisance associated with construction activity, detracting from the amenity value of public walkways close to the Ringsend WwTP site and resulting in a slight negative impact for the visiting population. Alterations to the boundary treatment along the southern and eastern boundaries of the WwTP are predicted to also result in impacts, which are slight/neutral significant in the longer-term operational phase along this section.
- 12.2.24. There is potential for short-term residual moderate impact on bathers and participants in other water sporting or recreational activities during the expected deterioration of water quality during 2019/2020, as tanks are taken off-line on a phased basis while being upgraded, as dealt with above. I am satisfied that the duration of this impact would be short-term in duration and given the overall long-term benefits that would result, this is acceptable.
- 12.2.25. Overall, I am satisfied that mitigation measures identified throughout the EIAR are sufficient to ensure that no unacceptable residual impacts or effects on population or human health are likely to arise during construction or operation.

Monitoring

- 12.2.26. No monitoring specific to population or human health is proposed. Monitoring is proposed in relation to other environmental factors which I have considered and referenced as relevant under specific sections of my assessment.

12.2.27. **Population and Human Health - RBSF Component**

Introduction and Existing Environment

- 12.2.28. The population of the EDs Ward and Dubber are identified as those which would be most likely to be aware of or be impacted by the development of the proposed RBSF component. The larger residential areas are concentrated within two and three kilometres from the RBSF site, separated by employment and industrial uses. There is a detached house at the eastern boundary of the site. A development of up to eight residential units is under construction on a site of two former houses, located c.25m from the eastern site boundary. In line with Dublin and the State there is a downward trend in unemployment.
- 12.2.29. In terms of the visiting population, recreational facilities and amenities within the immediate area include the Ward River, golf clubs and St. Margaret's GAA club. The Tolka Valley Regional Park is located 4.1 km to the south and west.
- 12.2.30. The EIAR provides information on the health status of the population from CSO 2016 census across local EDs (Dubber and The Ward). Sensitive receptors are identified as including: Charlestown medical and dental centre, St. Margaret's Primary and St. Luke's Primary school, Le Chéile secondary school and Tyrellstown community centre.

Potential Impacts

- 12.2.31. The construction and/or operation phases could potentially give rise to impacts on population / human health, including air quality and dust, noise, sludge storage and management, odour, traffic and pest control.
- 12.2.32. These impacts have been considered in detail in the EIAR by the appropriate specialists and I have dealt with these also under the assessment of the respective environmental factors. However, insofar as they overlap with human health, I have considered the mitigation measures proposed, as set out below, together with the residual impacts likely to arise post implementation of mitigation.
- 12.2.33. If permitted and implemented, the development would give rise to employment for c.70 construction workers and 10 new employment positions during operation,

resulting in positive impacts through economic benefits.

- 12.2.34. At a wider scale, positive indirect benefits would result for population and human health in supporting improved water treatment and providing a regional facility for the sustainable management of biosolids generated at the Ringsend WwTP and GDD Plant (if permitted).

Mitigation Measures

- 12.2.35. There are no specific mitigation measures proposed in relation to the resident, working or visiting population during construction or operational phases beyond those proposed under other specific environmental headings. The overarching design measure proposed for the construction stage centres around the preparation and adherence to the CEMP and a traffic management plan.
- 12.2.36. Air quality dispersion modelling found that in relation to traffic emissions during the construction phase, there would be no impact greater than imperceptible for receptors as a result of traffic emissions and, as such, there is no likelihood of adverse effects on human health arising out of air quality.
- 12.2.37. With employment of best practice, construction and operation noise is expected to fall within acceptable noise limits and, as such, would not give rise to negative impacts on human health.
- 12.2.38. With the implementation of good traffic management, no adverse effects on population or human health are likely to arise as a result of traffic during either the operational or construction phases. It is proposed that the local community would be kept informed of developments through a dedicated point of contact, including any traffic diversions.
- 12.2.39. In relation to odour, given that the treated biosolids would generate low odours and they are proposed to be stored indoors in a specially-designed building where odour control features are proposed to be employed, I am satisfied that significant effects on human health as a result of odour would not likely arise.
- 12.2.40. A rodent and pest control plan is proposed to be prepared and if implemented, this would prevent impacts to human health which could arise from the spread of

pathogens from rodents potentially disturbed during construction.

Residual Impacts

- 12.2.41. I would agree with the conclusion that the proposed RBSF component would result in slight negative short-term impacts on the local population during construction and no impacts would remain during the operation phase. Positive short-term impacts would also occur as a result of employment for 70 construction workers during this construction phase and opportunities for an additional 10 employees would arise in the operational phase.

Monitoring

- 12.2.42. No specific monitoring in relation to Population or Human Health is proposed. Specific monitoring relating to other environmental factors, as relevant are outlined under each specific Section of the EIAR.

12.2.43. **Conclusion on Population and Human Health**

- 12.2.43.1. 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, proposed mitigation measures and measures within suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable significant direct, indirect or cumulative impacts on **Population and Human Health**.

12.3. **Biodiversity**

12.3.1. **Marine Biodiversity - Ringsend WwTP component**

Introduction and Existing Environment

- 12.3.2. The site associated with the Ringsend WwTP, including the existing outfall is located outside but adjacent to the boundaries of eight European sites. These are listed under the heading of Terrestrial Biodiversity – Ringsend WwTP and are considered also under the heading of Appropriate Assessment.
- 12.3.3. The current status of the Liffey Estuary Lower (2015) remains ‘moderate’ and the coastal waters of Dublin Bay have a ‘good’ ecological status (Ref: Coastal Water

Quality Status 2010-2015 available on www.catchments.ie). The most recent Trophic Status Assessment (EPA, 2015) indicated that waters in the Lower Liffey Estuary and Dublin Bay can be regarded as 'Unpolluted', while the Upper Liffey Estuary is regarded as 'Eutrophic' and Tolka Estuary as 'Potentially Eutrophic'.

12.3.4. It is submitted in Section 5 of Volume 3 (Biodiversity - Marine) of the applicant's EIAR, that in the existing baseline scenario, the River Liffey and, to a lesser extent, the Tolka River, account for most of the total oxidised nitrogen (TON) input to Dublin Bay, while the WwTP is responsible for most of the phosphates and ammonia that are released into the bay. In this section, information is also provided about details of the intertidal marine benthic collection, marine mammals and fisheries together with results obtained from intertidal benthic surveys carried out in September 2015 and analyses of those results. Waterbirds are dealt with in my assessment under the heading of Biodiversity – Terrestrial.

12.3.5. In considering the marine environment, the area of the zone of influence of the effluent from the Proposed Ringsend WwTP component is presented in Figure 5-16 of Volume 3 of the EIAR and is stated to be based on the predicted modelled output for the winter depth averaged 50 percentile for Dissolved Inorganic Nitrogen (DIN). The zone broadly comprises the sea water inside the retaining walls, an area of the bay west of Bull Island and a small section to the south east of Bull Island.

12.3.6. Intertidal habitats of Dublin Bay include sandflats of fine to very fine sand and areas of soft muddy sand. The marine species recorded in Dublin Bay included anemone, worm types, crabs, shrimps, prawns, mussels, cockles, snails and fish. Marine mammals recorded in proximity to Dublin Bay included Minke Whale, Humpback Whale, Killer Whales, Harbour Porpoise, Bottlenose Dolphin, Common Seal and Grey Seal. Fish species recorded in the mouth of the River Liffey included: Trout, Bass, Sand Smelt, Common Goby, Mullet, Plaice, Nilsson's Pipefish, Sea Scorpion, Lemon Sole, Pollock, Spratt, Lesser Sand Eel, Eel, Flounder and Shore Rockling. Other species stated to be known to occur in the area include Salmon, Lamprey and Mackerel.

Potential Impacts

12.3.7. The Ringsend WwTP is currently not capable of achieving the necessary nutrient

reduction to meet the standards set out under the EPA Wastewater Discharge Licence and the UWWTD. It is expected that, in the absence of the proposed WwTP component, i.e. in the 'do-nothing/baseline' scenario, water quality in the receiving environment in the inner bay would likely deteriorate even further as wastewater volume / loading increase, leading to an increase in organic enrichment, oversupply of DIN to the area impacted by the existing outfall and a consequential decline in biodiversity in the Tolka Estuary and North Bull Island in particular. In this 'do nothing/baseline' scenario, the outer and south bays have been assessed as being unaffected by nutrient inputs from the WwTP at Ringsend. Notwithstanding this finding, it has been assessed that while localised impacts could occur, these would not be to a scale that could pose a threat to shellfish, fish or marine mammal populations in the Dublin Bay area.

- 12.3.8. During construction, the undersea tunnel / LSOT would not form part of the development and, as such, no direct physical disturbance of the seabed would occur. Therefore, Dublin Bay would not experience any negative impact including habitat destruction and/or changes in the nature or quantity of species. During the construction phase, there would be some reduction in effluent quality for a nine-month period in the winter of 2019/2020 during construction of the AGS structures and the SBR retrofit. There would also be an increase in the number of stormwater overflows from c.1.2% to between 2.5% and 3.3% of influent. It is submitted that the impact on marine aquatic and benthic ecology would not be discernible for this temporary period.
- 12.3.9. During the operation phase, the main impact on the marine biodiversity environment is predicted to be positive, due to improved water quality and decrease in nutrient loading in the treated effluent, leading to an increase in oxygen availability in Dublin Bay and, consequently, a substitution of algae and other microorganisms for a more biologically-diverse species. Such positive impacts are assessed as being limited to the species in the Tolka Estuary and the lagoons in the intertidal mudflats of North Bull Island. The changes/improvements are predicted as slow, as the areas of the bay would continue to be influenced by nutrient loads from the Liffey and Tolka rivers.
- 12.3.10. No significant adverse impacts on marine mammals or fisheries are predicted and

any changes to a richer fauna community is expected to be slow for the same reasons outlined. It has been assessed that seals may benefit from an increase in fish life in the inner part of Dublin Bay, as a result of improved water quality.

Mitigation Measures

- 12.3.11. Given that the proposed Ringsend WwTP component would lead to an improvement of water quality in Dublin Bay and a predicted corresponding improvement to the marine biodiversity environment, no mitigation measures are deemed to be required. Works throughout the construction phase would be required to comply with statutory requirements and adhere to the CEMP and best practice measures embedded into the design.

Residual Impacts

- 12.3.12. The assessment concludes that the proposed Ringsend WwTP component would give rise to an improvement in water quality status and positive impacts in the parts of inner Dublin Bay (the mouth of the Liffey, the Tolka estuary and the lagoons off North Bull island) resulting in increased diversity of benthic macroinvertebrates. Areas and habitats beyond these areas are considered to experience negligible changes as a result of the proposed WwTP component. It is also assessed that birds and marine mammals that forage within Dublin Bay would likely experience positive impacts because of the substitution of algae and other microorganisms for a more biologically-diverse species, though this impact is anticipated to be slow to occur. Residual impacts for the outer bay, sandflats off Bull Island and areas south of the South Great Wall have been assessed as negligible with habitats remaining unaffected by the proposed WwTP. I am satisfied with the conclusion that construction impacts would be no greater than indiscernible.

Monitoring

- 12.3.13. Monitoring of macroinvertebrate communities is proposed to detect any changes in the nature and abundance of the constituent taxa and post-construction water quality surveys are proposed to validate the mathematical results from modelling.

12.3.14. **Marine Biodiversity - RBSF component**

Residual Impacts

12.3.15. The assessment concludes that the proposed RBSF Component would not have any negative impacts on **Marine Biodiversity**, due to its large separation distance from the sea. I am satisfied that this is the case and that no further assessment is required.

12.3.16. **Terrestrial Biodiversity - Ringsend WwTP component**

Introduction and Existing Environment

12.3.17. It is submitted that the effluent from Ringsend WwTP cannot be detected outside of Dublin Bay, and therefore the assessment is confined to those European sites within the area of the bay along the seaward limit, which extends from Baily Lighthouse to Dalkey Island, as presented on Figures 6-1 (SAC European sites in Dublin Bay) and 6-2 (SPA European sites in Dublin Bay) of Section 6 in Volume 3 to the EIAR.

12.3.18. Accordingly, there are eight European sites identified as having potential to be adversely affected by the proposed Ringsend WwTP component. These are presented in Figures 6.1 and 6.2 of Section 6 of the EIAR (Volume 3) and are listed under as follows:

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

12.3.19. As the Proposed WwTP Component could potentially result in significant effects on the designated European Sites within Dublin Bay and the immediate vicinity, having regard to the sites conservation objectives, a Natura Impact Statement is included

with the application and I consider this aspect under the heading of Appropriate Assessment below. These European sites are described in the Natura Impact Statement that accompanies this Planning Application.

12.3.20. The following proposed NHAs lie within Dublin Bay and the surrounding environment:

- South Dublin Bay pNHA (site code 000201);
- North Bull Island pNHA (site code 000206);
- Howth Head pNHA (site code 000202);
- Grand Canal pNHA (site code 002104);
- Royal Canal pNHA (site code 002103) and
- Dalkey Coastal Zone & Killiney Hill pNHA (site code 002106).

12.3.21. Intertidal areas support large waterbird populations. Terrestrial habitats include coarse grassland outside of the WwTP and a bund to the east which contains an area of immature woodland and ornamental shrub which I am satisfied is of low conservation value. The eastern bund also contains invasive plant species (Japanese Knotweed). Irishtown Nature reserve to the south and this is used by wintering waterbirds. It is stated in the EIAR that it was originally provided as a winter feeding area for light-bellied Brent Geese. Waterbird numbers were drawn from monitoring surveys carried out as a condition attached to the adjoining Waste to Energy plant and surveys carried out by Birdwatch Ireland. Brent Geese were evidently recorded on this grassland from November to April each year varying between 34 and 411 over the eight winters 2007/08 to 2014/15. The grassland is stated to be also used by waders, with peak counts in winter 2014/2015 of 44 Oystercatcher, 3 Black-tailed Godwit, 1 Curlew, 2 Redshank and 3 Black-headed Gull (Mayes, 2015). Occasionally large flocks of Black-headed Gulls and Herring Gulls are stated to have also been recorded on the grassland.

12.3.22. At a wider level, Dublin Bay hosts internationally important bird species including: Light-bellied Brent Goose, Knot, Black-tailed Godwit and Bar-tailed Godwit, as well as 19 other species in nationally important numbers. Both Common Tern and Arctic Tern breed in Dublin Port. In late summer and autumn, large numbers of post-

breeding terns congregate in South Dublin Bay, originating from a wide area throughout Ireland. The terns forage in Dublin Bay, including the area potentially affected by the effluent arising from the Ringsend WwTP.

- 12.3.23. A colony of Black Guillemots is also known to breed in the quayside areas of Dublin Port and in the tidal stretches of the River Liffey. These birds forage in Dublin Bay, including the area potentially affected by the effluent arising from the Ringsend WwTP.

Potential Impacts

- 12.3.24. In the 'baseline/without project' scenario, invasive species (Japanese Knotweed) would spread further on the eastern boundary of the site. In addition, the nutrient outputs from the WwTP due to operational overload and stormwater discharges could result in a decline in the biodiversity of invertebrate communities in the Tolka Estuary and the North Bull Island channel, though it is stated to be unlikely that this scenario would have any significant impact on the waterbird populations that forage in Dublin Bay.
- 12.3.25. The removal of the bund at the eastern end of the WwTP site would involve the removal of recently planted trees and shrubs which would lead to a loss of habitats of low biodiversity value. Connection of a high-voltage ESB cable is a requirement and during construction of this element, this could lead to temporary impacts on the terrestrial biodiversity environment, as the work would occur in an area within South Dublin Bay and River Tolka SPA.
- 12.3.26. It is submitted in the EIAR that there is potential for indirect visual disturbance to Brent Geese and other waterbirds using this amenity grassland immediately south of the WwTP, arising from construction activity and movement of construction workers. I note however that the waterbirds would be accustomed to visual interaction with similar type of activities during the current operation of the plant and adjoining industrial maintenance and operation activities, which leads me to conclude that this impact would not likely be significant.
- 12.3.27. It is submitted that construction noise would not result in significant impacts on both wintering and summering waterbirds in Dublin Bay, as these waterbirds are

habituated to noise from similar construction and industrial activities in the surrounding environment and, therefore, construction is not considered to be threatening to waterbirds and terns which are qualifying interests of the European sites in Dublin Bay. It is also submitted that the noise levels which the tern colony would generate, stated to be up to 70 to 80 dB(A) would far exceed the level of construction noise. While that may be so, noise associated with construction activities would be of a different type than noise type generated by the waterbirds or tern colonies themselves. However, given the nature of the area which is predominately characterised by heavy industry and similar activity whereby construction and maintenance are not new features, I accept that the waterbird populations would be accustomed to such noise and that there would be no significant impacts likely on waterbirds or terns in the absence of mitigation. By way of comparison, it is stated that during the construction of the sewage treatment plant at Mutton Island in Inner Galway Bay, numbers and diversity of wader species roosting close to the construction site remained stable or slightly increased (Nairn, 2005).

- 12.3.28. It is stated that effects of dust deposition on flora or fauna would be imperceptible as the levels would not be high enough such as to cause any adverse impacts on flora or fauna. In addition, waterbird species are not sensitive to NO_x concentrations contained in air emissions which could occur during construction and operation phases.
- 12.3.29. During operational phases, the potential indirect impacts on intertidal habitats in Dublin Bay would be neutral or somewhat positive in the vicinity of the existing discharge location or in the wider coastal and marine area.
- 12.3.30. The EIAR addresses concerns that an improvement in water quality and biological status of estuaries through the project delivery and a reduction in nutrient loads could have a knock-on effect on the trophic food chain and consequently waterbird populations. While some changes are expected to occur, particularly to algal blooms which are a source of organic matter to the benthic ecosystems, it is submitted that this would be limited to the northern sections of Dublin Bay. It is submitted that the proposed WwTP component would not have any detrimental impacts on the aquatic food chain in the bay and that as a result of the proposed WwTP component, benthic

macroinvertebrates are assessed as likely to become more diverse and phytoplankton is unlikely to become less abundant, but rather more diverse and such changes would likely be slow to occur. It is stated that the Tolka Estuary would continue to be affected by some level of organic enrichment from the Liffey and Tolka rivers. The conclusion reached, based on previous scientific studies and results from surveys is that the bird populations, whether dependent on aquatic plants or infaunal macroinvertebrates are not being likely to be impacted by the proposed WwTP component. I am satisfied based on the scientific information submitted that the proposed WwTP component would not lead to any detrimental impacts in the bay and the bird populations would not be negatively impacted on.

Mitigation Measures

- 12.3.31. Solid screening is proposed to be erected prior to construction to reduce or eliminate any visual disturbance from construction activities to Brent Geese and other waterbirds using the amenity grassland to the south. I note that this is already in place, stated to be part of a works contract and I assume would also serve to secure the construction site.
- 12.3.32. No mitigation is considered to be required in relation to noise impacts on waterbirds or nesting terns, as these species are accustomed to traffic and machinery noise in the area.
- 12.3.33. An Invasive Species management plan is proposed to be prepared and implemented as a control measure to prevent the spread of Japanese Knotweed. A dust management plan is proposed to be implemented during construction. No dust mitigation measures are stated to be required or proposed during operation.
- 12.3.34. The required connection to the ESB high voltage cable would be carried out in the period between 1st May and 31st August (when the Brent Geese are absent from the SPA) and the construction area would be fully reinstated by backfilling with the original soil and laying of grass turves in their original position. The grassland is proposed to be fully reinstated in time for the return of the geese in September/October.

Residual Impacts

- 12.3.35. The assessment concludes that with mitigation in place, no negative impacts are predicted on terrestrial biodiversity (including flora and fauna) during either the construction or operation phases, as a result of the Ringsend WwTP component. Based on scientific information presented in the EIAR, there is no evidence to suggest that the anticipated reduction in nutrient loading would give rise to adverse impacts on the trophic food chain and consequently waterbird populations.
- 12.3.36. The Parks and Landscape Services Division of Dublin City Council state their requirement that all invasive species are removed entirely from the Ringsend WwTP site and they request that a condition be attached seeking proposals to be submitted in this regard. No submission was received from the Department of Culture, Heritage and the Gaeltacht / National Parks and Wildlife Service (NPWS) addressing biodiversity.

Monitoring

- 12.3.37. It is stated that monitoring of waterbirds on the grassland would take place during construction and for a year after to establish the efficacy of the mitigation measures on potential disturbance. A comprehensive monitoring programme currently being undertaken by Birdwatch Ireland for all of Dublin Bay, is also proposed to be used to inform the assessment of the efficacy of potential changes in waterbird populations related to effluent discharge.
- 12.3.38. Annual monitoring to determine the efficacy of measures used to control the spread of invasive species is also proposed.

12.3.39. **RBSF component**

Introduction and existing environment

- 12.3.40. The site comprises mainly open areas of grassland, with dry meadow and grassy verges and areas are being grazed by horses. It is not covered by any nature conservation designations.
- 12.3.41. There are three European designated sites within 10 km radius of the site: Malahide Estuary cSAC (site code 000205), Malahide Estuary SPA (site code 004025) and

South Dublin Bay and River Tolka Estuary SPA (site code 004024).

- 12.3.42. Two pNHAs are also located within a 5km radius: Royal Canal pNHA (site code 002103) and Santry Demesne pNHA (site code 000178). There are no ecological pathways between these pNHAs and the RBSF component and I am therefore satisfied that no impacts would arise on these pNHAs.
- 12.3.43. A drainage ditch runs along the western perimeter of the site. It is submitted to be of negligible biological value due to it having a silty substrate and very slow flow. It flows into the Huntstown stream which is a tributary of the Ward River, c.5km from the site. As informed by IFI, the Ward River is an important salmonid system, having resident salmon and sea trout populations. The river enters the Broadmeadow River north of Swords and ultimately discharges into the Malahide Estuary cSAC.
- 12.3.44. Bird species recorded on the site are common in farmlands with one species, Robin, amber-listed (medium conservation concern) in the 'Birds of Conservation Concern in Ireland' (Colhoun and Cummins, 2013). No larger mammals were observed on site. Badger foraging and commuting signs were found on the site. Five bat species were recorded on the site, largely associated with Leisler's bat, with some activity of Common pipistrelle, and low numbers recorded for other species (Soprano pipistrelle, unidentified Myotis species and unidentified Pipistrellus species). Trees and structures on site are not considered suitable for roosting of bats.
- 12.3.45. Overall, I would accept the applicant's conclusion that the site is of local importance in terms of terrestrial biodiversity.

Potential Impacts

- 12.3.46. In terms of terrestrial biodiversity, dry meadow and grass habitats would invariably be lost as a result of the development. No hedgerows or treelines are proposed to be removed as part of the proposed RBSF component and breeding birds would not be adversely impacted during construction.
- 12.3.47. Bats would be able to continue to feed in remaining grassland areas and along field boundaries. As approximately half of the grassland would remain undeveloped, adequate area would remain for foraging by badgers.

- 12.3.48. Impacts would be no greater than imperceptible and negative in the long-term / operational phase.

Mitigation Measures

- 12.3.49. During construction, no vegetation would be cleared from the site during the bird breeding season (between 1st March to 21st August) to avoid disturbance to nests, subject to results of a breeding bird survey, prior to construction. If no breeding birds are observed during the survey, it is stated that this mitigation measure would not be required. I consider this approach to be reasonable. Noting observations of badger usage of the site for foraging, confirmatory surveys for badgers are proposed prior to construction and, if required, appropriate mitigation measures would be put in place. Stormwater would be attenuated and discharged at greenfield runoff rate. Petrol and oil interceptors would be used to remove any potential contaminants from run-off from the site. Any run-off with potential for containing biosolids would be collected and discharged to a public wastewater sewer.
- 12.3.50. During the operation phase the northern site area would be planted with deciduous trees to mitigate loss of foraging areas for bats. Floodlighting would be directed downwards to avoid light spread to cover this proposed planting. As part of the design, during operation, wastewater and run-off within the buildings and any run-off with potential for containing biosolids would be collected and pumped to a public sewer.

Residual Impacts

- 12.3.51. I would agree with the conclusion arrived at, that with mitigation in place, no negative impacts are predicted on the terrestrial biodiversity environment beyond neutral and imperceptible, as a result of the RBSF component.

Monitoring

- 12.3.52. No monitoring is proposed, which is acceptable.

12.3.53. Conclusion on Biodiversity

- 12.3.54. 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, proposed mitigation measures and measures within suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable significant direct, indirect or cumulative impacts on **Biodiversity**.

12.4. **Land, Soil, Water, Air and Climate**

12.4.1. **Land and Soil - Ringsend WwTP Component**

Introduction and Existing Environment

- 12.4.2. Subsurface information from geotechnical investigation and published data indicates that the site comprises a minimum of 6.3m of made ground on marine sediments to depths of up to 14.5m below ground level (bgl). During investigations, glacio-marine deposits were encountered below this layer to depths of up to 22.8m bgl. Bedrock comprising weathered limestone with interbedded siltstone and mudstone was encountered at levels between 41.3m and 47.1m bgl.
- 12.4.3. The made ground encountered on site comprises predominately sand, clay and gravel. It is stated that large proportions of manmade waste material were observed in the geotechnical investigations, containing building waste, tyres, metal, cinders and some hazardous material including asbestos.
- 12.4.4. No geological heritage sites are located within the proposed WwTP site. Two such areas, North Bull Island and Bottle Quay, are located relatively close.
- 12.4.5. In terms of hydrogeology, the aquifer classification for the Calp Limestone formation by the Geological Survey of Ireland (GSI) is locally important (Li). There is no detailed vulnerability classification on the GSI database from the site, however, by applying GSI guidance, the vulnerability of the shallow groundwater is assessed as 'high' and the deeper aquifer is assessed as 'low'. Groundwater underlying the site is hydraulically connected to Dublin Bay and responds to tidal changes. It is saline in nature and not considered a suitable groundwater resource. Results for permeability coefficient (k) within the made ground were quite variable, ranging from 1.5×10^{-9} m/s to 2.4×10^{-2} m/s (Causeway, 2012 and 2016).

Potential Impacts

- 12.4.6. Spoil from excavation works within made ground would comprise an estimated 2,030

cubic metres of hazardous waste material, as well as other made ground with marine sediments, which could lead to negative impacts if not appropriately handled.

- 12.4.7. Piling works proposed have the potential to create vertical pathways in which potentially contaminated soils, sediment and groundwater could migrate downwards. However, as stated above, the underlying aquifer is not a potable groundwater resource.
- 12.4.8. Dewatering abstractions would require sheet piling to prevent groundwater inflows during excavations. However, no significant volumes of water are intended to be abstracted and the dewatering is not therefore considered to result in significant effects on the hydrogeological environment.
- 12.4.9. A 'do-nothing' approach to the Japanese Knotweed would result in a significant permanent negative impact. It is submitted that the control of the Japanese Knotweed would need to be addressed regardless or not of whether the Proposed WwTP Component proceeds.
- 12.4.10. Proposals for the removal of Japanese Knotweed is planned and it would be appropriate to condition same.
- 12.4.11. Potential impacts could occur from accidental spillages of pollutants or hydrocarbons during construction.
- 12.4.12. During the operation phase no direct discharges to the soil or hydrological environment are proposed and as such no significant impacts are anticipated.
- 12.4.13. When compared to the LSOT option, the AGS option would result in significantly less excavations. It is stated that the LSOT would have generated 850,000 tonnes of spoil during construction (and associated c. 70,000 truck movements) over an 18-month period. In addition, the current AGS option allows for the recovery of most of the phosphorous from the wastewater as distinct from the LSOT option in which c. four times as much phosphorous would have been discharged 9km out to sea. Therefore, in terms of waste recovery, the AGS option can be deemed to bring significantly greater benefits.

Mitigation Measures

- 12.4.14. The proposed CEMP is the overarching mitigation embedded in the project design and delivery and, if implemented appropriately, would ensure good construction management and best practice and accordingly minimise the potential for harmful impacts on the land and soils environment.
- 12.4.15. A site-specific waste management plan is also proposed to be prepared by the contractor and agreed in advance of the works. Disposal of unusable soils and waste materials encountered would be the responsibility of the contractor, who would be required to comply with statutory obligations. Three waste facilities with operational licences for acceptance of non-hazardous waste have been identified. Hazardous waste would be required to be exported overseas. Contaminated soils would be removed from the site for safe treatment and therefore no impact is predicted regarding waste disposal. It is stated that a project waste manager would be appointed by the contractor to oversee the implementation and adherence to the plan during the construction phase of the Proposed WwTP Component.
- 12.4.16. The appointed contractor would be required to provide a method statement for the dewatering of excavation below the water table.
- 12.4.17. Management of construction induced settlement would form part of the contract documents and these would include condition surveys and physical monitoring of settlements.
- 12.4.18. In order to mitigate potential impacts associated with the spread of invasive species, contract documents for the proposed WwTP are proposed to include a requirement that a suitably qualified ecologist would be engaged to oversee the implementation of the Invasive Species management plan and monitor the success of the mitigation measures post-construction.
- 12.4.19. No specific mitigation is proposed for the operational phase apart from adherence to best practice.

Residual Impacts

- 12.4.20. I am satisfied that with mitigation in place, no significant negative impacts are likely

to arise on land and soils as a result of the Ringsend WwTP component. As contaminated soils would be removed from site, the predicted impact on the land and soils environment would result in a slight positive permanent impact. The removal of Japanese Knotweed currently on site would also result in a slight positive permanent impact.

Monitoring

12.4.21. No monitoring is proposed for land and soils outside of monitoring for the success of invasive species removal and monitoring for construction induced settlement. I consider this to be acceptable.

12.4.22. **Water - Ringsend WwTP**

Introduction and Existing Environment

12.4.23. This section of my report should be read in conjunction with the section – Principle and water quality set out under the planning assessment above. Section 4 of the EIAR in Volume 3 addresses the water environment at the Ringsend WwTP. The assessment of water focuses on the discharge from the treatment plant and considers the impact that would arise from the increase in flow and the improvement in the effluent quality. Groundwater/hydrogeology is considered separately under Section 7 (Land and Soils) of the EIAR (Volume 3) and I have dealt with this under the heading of Land and Soils above. The principal wastewater discharge point is located in the Poolbeg power station cooling water discharge channel in the Liffey Estuary and a stormwater overflow discharge point is located at Pigeon House harbour.

12.4.24. The required standards for the final effluent discharge are set out in the EIAR and are presented in Table 1 within the planning assessment section above. While the required ELVs relate to total Nitrogen (N) and total Phosphorous (P), water quality legislation and the assessment carried out in the computer modelling considered the parameters DIN and MRP. DIN is related to total Nitrogen as it represents the soluble organic fraction in water, available for biological uptake. Similarly, MRP is related to total Phosphorous representing the soluble organic fraction available for biological uptake. Total N and Total P include insoluble inorganic and soluble organic fractions which are not measured as part of DIN and MRP. The future DIN is

estimated to be between 80% and 90% of Total N and the future MRP is estimated to be between 70% and 80% of Total P.

- 12.4.25. The computer models used in the assessment included DHI MIKE 3 FM model and CEFAS CDPM model. The DHI MIKE 3 FM model is a hydrodynamic model and was used to analyse how the final effluent discharge disperses within the receiving water, while the CEFAS DCPM model was used to analyse the biological response (chlorophyll and macroalgae) to the final nutrients (nitrogen and phosphorous) inputs in the effluent being discharged into the receiving water. The CEFAS DCPM model focused on the Tolka Estuary, as the DHI MIKE3 model identified the Tolka Estuary as experiencing the highest impact from the Ringsend WwTP final effluent discharge. Both models drew on available scientific data and data collected from marine surveys. Water quality in the receiving water is monitored on an ongoing basis by the EPA and Dublin City Council and is therefore well understood. The MIKE 3 model was constructed from available data and refined and calibrated using additional marine survey results. It was then validated by comparing ongoing field sampling of the receiving waters (BOD, DIN and MRP). The DCPM model was calibrated from the boundary conditions identified in the MIKE 3 model at the entrance to the Tolka estuary.

Potential Impacts

- 12.4.26. The main changes in water quality arising from the upgraded Ringsend WwTP would be positive in that there would be a higher quality of treated effluent achieved and a reduction in pollutants released to the water environment.
- 12.4.27. The proposal to omit the LSOT and associated diffuser point 9 km out to sea would mean that there would be no deterioration of water quality at this location.
- 12.4.28. It was assessed through the modelling that as a result of the Ringsend WwTP upgrade, once complete and operational, there is a predicted positive imperceptible impact on the receiving water environment in respect of BOD and SS. In respect of ammonia, there is a predicted positive moderate impact. A reduction in the total DIN load discharged from the Ringsend WwTP is predicted and would be experienced primarily in the Tolka Estuary. The overall impact from the change in DIN discharge is considered positive and imperceptible. The impact of the Proposed WwTP

component in respect of the MRP parameter is also predicted as being positive and moderate.

- 12.4.29. It is also predicted that there would be a positive and not significant impact from the Proposed WwTP Component, in respect of the E.Coli parameter, both during normal operation and during storm events. A neutral impact is predicted on designated bathing areas as a result of E.coli.
- 12.4.30. During the construction phase, in the winter of 2019/2020, as stated above some processes would be removed on a phased basis resulting in reduced treatment capacity and hence a reduction in the final effluent quality is predicted. It is submitted that the nutrient (DIN and MRP) levels are not as critical during the winter months. It is also predicted that there would be a negative imperceptible and temporary impact with regard to the BOD and SS during this period. In terms of BOD, the quality standard is predicted as remaining below the 4 mg/l which is the parameter for 'good status' in transitional waters. This has been rated in the EIAR as having minor or slight significance on water. Similar to my consideration of the impact on recreational water based activities (and as assessed under the heading of population and human health), I would be more inclined to conclude that this impact would be 'moderate' rather than 'slight' in terms of significance on the water environment as it is stated in the EIAR, under the heading of Population and Human Health, that the impact would be largely dependent on overall water quality in the area at the time of the works which is stated to be largely carried out over a winter period but with an overlap of nine months.

Mitigation Measures

- 12.4.31. As the impacts on water quality of the receiving waters are identified as positive, no mitigation is proposed or necessary which, noting the intention of the development is to approve quality of effluent to the required standards is acceptable. I am mindful that there is an expected temporary moderate negative impact during the construction phase arising from the removal of some processes as outlined above over winter 2019/2020. While this could be mitigated by extending the specific works over a longer timescale, I accept the point made regarding the benefit of completing the construction over the intended shorter timeframe would bring positive benefits

earlier in the timeline that would outweigh any negative impacts were the timeline to be extended.

Residual Impacts

- 12.4.32. The residual impact of the Proposed WwTP component with respect to water quality would clearly be significantly positive in the long-term, arising from the improved final effluent and the proposed development would ensure the upgraded plant would be consistent with the UWWTD. In addition, the development would serve to protect the status of the receiving waters as required under the WFD and the BWD. As stated above, during the winter of 2019/2020 there would be a moderate impact on water quality for a short period during the period of decommissioning tanks. No long-term impacts beyond positive impacts are anticipated to arise because of these works. Accordingly, a short term moderate impact is acceptable.

Monitoring

- 12.4.33. The final effluent would be monitored in accordance with the terms of the Wastewater Discharge Authorisation (EPA Licence D0034-01) for the plant and this licence would likely be reviewed. Beyond this, no additional monitoring is proposed, which I consider is acceptable.

12.4.34. **Air and Climate - Ringsend WwTP component**

Introduction and Existing Environment

- 12.4.35. Baseline data and data available from similar environments indicates background concentrations in the vicinity of the Ringsend WwTP (2017) as follows:

- Nitrogen dioxide (NO₂) = 32 µg/m³
- Particulates (PM₁₀) = 15 µg/m³
- Particulates (PM_{2.5}) = 10.05 µg/m³
- Benzene = 1 µg/m³
- Carbon Monoxide (CO) = 0.44 mg/m³

- 12.4.36. These all lie below the National and EU ambient air quality standard limits. Records

on prevailing winds were examined from the nearest representative weather station at Dublin airport, located 10 km north of the site.

Potential Impacts

- 12.4.37. Dust deposition arising from the construction phase has the potential to cause temporary slight local impacts at nearby residential properties within a separation distance of up to 200m. The closest residence to the main construction works is c.950m and I am satisfied that the residential receptors are unlikely to be affected by dust emissions from the WwTP site.
- 12.4.38. Vehicles transporting material also have potential to lead to dust generation along haul routes to and from the site. Four residential receptors were identified and modelled to establish the air quality and predicted impacts. Their locations are shown on Figure 8.2 within Section 8 of Volume 3 of the EIAR. I am satisfied that as submitted by the applicant, receptor R03 at Seán Moore Road would be representative of residential development that may be delivered at the Poolbeg SDZ.
- 12.4.39. The maximum impact identified is a predicted increase of 4.6% of NO₂ at receptor R2, deemed to be a slight adverse impact during construction. The potential impact is considered to be insignificant at all other receptor locations. The predicted impact of the proposed WwTP component during the construction phase with regard to PM₁₀ and PM_{2.5}, CO and Benzene is predicted to be imperceptible, short-term and reversible at all four of the receptors assessed and the impact would inevitably decrease post completion of construction works.
- 12.4.40. During the operation phase, there is potential for a number of emissions to be released to the atmosphere. Emissions of NO_x (NO + N₂O) from the nitrifying and denitrifying cycles within the plant could cause an impact to local air quality. However, it is stated that these emissions currently occur on site without issue and with the improved AGS process and improved process control, this would limit the volume of NO_x released.
- 12.4.41. In the operation phase, impacts on air quality would potentially arise as a result of increased traffic volumes which could lead to increased quantities of air pollutants. This impact has been assessed by modelling emissions from the traffic generated. In

this regard impacts of the proposed WwTP component during operation from release of air pollutants (NO₂, PM₁₀ and PM_{2.5}, CO and Benzene) are predicted to be imperceptible.

- 12.4.42. Greenhouse gas emissions produced during construction phase of the proposed WwTP are expected to account for 0.03% of Ireland's EU 2020 target. The AGS option is predicted to give rise to a lower emissions during construction particularly because of lower level of excavations and HGV movements and associated energy consumption.
- 12.4.43. During operation, an overall comparison of power consumptions for both the LSOT and AGS options found that the energy consumption during operation is expected to be comparable for both options. In terms of energy management, it is stated that the WwTP currently operates Ringsend WwTP to energy management standard ISO 50001 and would continue with improvements to achieve economic and energy efficiency including the recovery of renewable energy.

Mitigation Measures

- 12.4.44. During construction, no mitigation is proposed apart from adherence to good practice and the overarching CEMP, including dust minimisation measures. No site-specific mitigation measures are required during the operational phase of the proposed Ringsend WwTP component.

Residual Impacts

- 12.4.45. The assessment concludes that once dust minimisation measures are employed during construction, no negative residual impacts are predicted on the Air and Climate environment as a result of the Ringsend WwTP component. Neither are any residual impacts anticipated during the operational phase of the Proposed WwTP Component. I am satisfied that with the Ringsend WwTP component in place, air pollutants in the local area would be below the National and EU ambient air quality standard maximum limits.

Monitoring

- 12.4.46. During the construction phase, dust deposition monitoring using the Bergerhoff Gauge is proposed such as to ensure dust mitigation measures are adequately

controlling emissions. The TA Luft limit value of 350 mg/m²/day would be applied during the monitoring period of between 28 - 32 days. No monitoring of dust is proposed during the operational phase, which, given that all biosolids would be stored indoors, is acceptable.

12.4.47. **Noise and Vibration - Ringsend WwTP component**

Introduction and Existing Environment

12.4.48. Noise and Vibration are considered together under Section 9 of Volume 3 of the EIAR. The residential receptors most sensitive to noise are identified as including houses along Strand Road (R131), which are located approximately 950m to 1,250m from the nearest boundary of the WwTP. The assessment considered the impacts on these receptors and also Poolbeg West SDZ lands, which have been identified for residential development, where the nearest receptor (R03) would be located 600m from the construction compound (C1). BS 5228-1:2009+A1:2014 sets out guidance on permissible noise levels relative to the existing noise environment and based on this, the proposed threshold for the Ringsend WwTP proposal would be 70 L_{Aeq(1 hour)} dB (daytime), 65_{Aeq(1 hour)} dB (evening) and 55_{Aeq(1 hour)} dB (night-time) at the nearest noise sensitive receptor.

12.4.49. By reference to BS8233:2014, during the operational phase, the following noise limits would apply at the façades of residential properties closest to the Ringsend WwTP project:

- Daytime (07:00 to 23:00 hours) 55 dB_{L_{Aeq,16hour}};
- Night-time (23:00 to 07:00 hours) 45 dB_{L_{Aeq,8hour}}.

12.4.50. Vibration was considered across the category of human comfort and cosmetic damage. The allowable vibration limits were applied to nine residential receptors, marked R01 to R08 and R11 on Figure 9-2 Vibration Sensitive Receptors within Section 9 of Volume 3 of the submitted EIAR. Vibration impacts on Pigeon House Fort (a protected structure immediately partially within the site) and Old Pigeon House Hotel (a protected structure located further north) were also considered.

Potential Impacts

12.4.51. Typical construction noise is predicted to arise during the construction phase, which

due to the size of the site and the scale of the works, could be significant during daytime. Construction hours proposed are 08:00 to 18:00 for week days and from 08:00 to 13:00 on Saturdays. These are standard and acceptable. The predicted external construction noise levels are predicted to fall within the relevant noise criteria over the construction phase during both the capacity upgrade and the proposed retrofit works to incorporate AGS technology.

- 12.4.52. The level of construction traffic noise would be significantly below the prevailing existing daytime noise levels and just slightly above evening time noise levels. Overall, the impact of construction-related traffic on public roads is regarded as insignificant.
- 12.4.53. Noting the distance of the piling works from the closest sensitive structure (the wall of Pigeon House Fort), the expected vibration levels are estimated to be significantly below the limits recommended to prevent cosmetic damage to sensitive buildings or structures. Vibration impacts arising out of construction traffic are deemed to be insignificant.
- 12.4.54. For the operational phase, noise models predict noise levels would be in the region of 15dB to 35dB at nearby residential receptors. Such levels are at or below existing background noise levels and well below the 45dB night time threshold set out in the British Standard BS8223:2014.
- 12.4.55. During the operation phase, the proposed AGS reactor block is stated would provide additional acoustic screening to the existing plant items on the site. It is envisaged that a reduction in operational noise level of between 3 and 5dB could result once the reactor block is in place and the impact of the proposed WwTP component during operation can therefore be considered slight positive. Noise associated with traffic during operation is assessed as insignificant.
- 12.4.56. No impacts are expected to occur as a result of vibration during operation.
- 12.4.57. Discussion on the potential noise impacts of the development on local fauna is dealt with above under the heading Biodiversity – Terrestrial.

Mitigation Measures

- 12.4.58. During construction, the appointed contractor would be required to prepare and adhere to a Noise and Vibration Management Plan (NVMP) which would include measures to manage and remove or reduce any significant noise and vibration impacts arising at construction stage.
- 12.4.59. Mitigation for the operation phase would include a number of items, such as selection of 'low noise' equipment and plant, vibration isolation mounts and appropriate siting of fixed plant.

Residual Impacts

- 12.4.60. The assessment concludes that once best practice measures are employed during construction and operation phases, noise and vibration generated would fall within acceptable limits which is acceptable. For further assurances in this regard, these should be regulated by condition.

Monitoring

- 12.4.61. The assessment concludes with a recommendation that the appointed contractor monitor levels of noise and vibration at nearby sensitive locations and/or development site boundaries.

- 12.4.62. **Odour - Ringsend WwTP component**

Introduction and Existing Environment

- 12.4.63. It is well reported that the Ringsend WwTP caused an odour nuisance to the local community in the early years. More recently, a number of measures were put in place to control odour and this coupled with odour management are stated to have been successful in significantly reducing odour nuisance at the plant.
- 12.4.64. It is stated that further works are ongoing including the recent provision of the three new Bord na Móna Odour Control Units (OCUs).

Potential Impacts

- 12.4.65. The potential odour impact is assessed by reference to two standards which are:

1. **Ringsend Project Odour Goal** – This standard is specific to the Ringsend WwTP and requires that odour emanating from the site shall not exceed $10 \text{ ou}_E/\text{m}^3$ as the 99.4th percentile of hourly averages at the boundary of the Ringsend WwTP site. The plant storm tanks are not included in the assessment of this odour goal.
2. **Ringsend Odour Target** - This is a general standard and relates to EPA Guidance in which an odour limit of $3 \text{ ou}_E/\text{m}^3$ is set at sensitive receptor locations on a 98th percentile of hourly averages. Once odour concentrations lie below this level, odour annoyance is unlikely to occur. The plant storm tanks are included in the assessment of this odour goal.

- 12.4.66. The likely odour to occur was assessed using the United States Environmental Protection Agency (US EPA) approved AERMOD model, which is a dispersion model based on the Gaussian theory of plume dispersion. I am satisfied that this method is widely used in Ireland and internationally for assessment of odour and is appropriate for the current proposals.
- 12.4.67. It is reasonable to accept the applicant's assertion that there is no likely significant odour impact anticipated as a result of construction activity. Post construction, the assessment concludes that the maximum predicted concentrations at the site boundary would fall between 6.20 and 7.30 ou_E/m^3 , as the 99.4th percentile of hourly averages, which is less than 75% of the assessment criterion 'Project Odour Goal' of $10 \text{ ou}_E/\text{m}^3$. The improvements in odour due to the expected reduced odour emission from the open sources is predicted to reduce the odour concentration by between 5% and 13% compared to the future 'baseline/without project' scenario.
- 12.4.68. The results of the odour assessment found that the predicted odour concentrations at all areas of long-term public exposure and potential areas of future residential use, including the Poolbeg West SDZ, would lie below the adopted limit of $3 \text{ ou}_E/\text{m}^3$ as the 98th percentile of hourly averages. The area occupied by the construction compound C1, included in the Poolbeg West SDZ is designated for mixed uses, predicted to have an odour concentration of between 1 and 8.5 ou_E/m^3 as the 98th percentile of hourly averages. These lands are stated to be in the ownership of Dublin Port and based on examination of the Dublin Port Masterplan, the lands shown are currently proposed to be redeveloped to support cargo handling activities.

The primary planned use of these lands is set out in the masterplan as one which would provide sufficient land capacity for the throughput of the new 600-metre-long container terminal quay wall. In its report to the Board on the current application, Dublin City Council SDZ team state that the lands are proposed to be utilised for cargo storage. I am satisfied that such a use would not be sensitive to odour and is well understood in advance of its development.

- 12.4.69. It is also of particular relevance to note that in comparing the implementation of the proposed WwTP component scenario to the future 'without project' scenario, the proposed WwTP component would result in an imperceptible positive impact as a result of a slight reduction in odour concentration at existing receptor locations.

Mitigation Measures

- 12.4.70. It is submitted that the principles of the site Odour Management Procedures (OMP) would be followed to include odour management for the construction phase of the new processes.
- 12.4.71. During operation, the site OMP would be updated to reflect odour management of new processes and identification of new odour emission sources for operational, management and maintenance procedures. Certain new sources associated with the upgrade would be covered and treated.

Residual Impacts

- 12.4.72. It has been demonstrated through the assessment that once mitigation and best practice measures are employed during construction and operation, negative impacts are not predicted on the environment as a result of odour emanating from the Ringsend WwTP upgrade.
- 12.4.73. Dublin City Council's Parks and Landscape Service considered the issue of odour impact to the adjacent nature reserve and coastal recreational area and concluded that as the facility is designed to achieve appropriate odour standards and that odour nuisance is not expected to occur. I am satisfied that this has been determined through assessment.

Monitoring

12.4.74. It is proposed to monitor odour sources at the Ringsend WwTP to ensure the effective management of the facility including olfactometry survey of elements, of the converted AGS reactors.

12.4.75. **Land and Soils - RBSF component**

Introduction and Existing Environment

12.4.76. Site investigations carried out in 2001 and 2017 revealed that the RBSF site comprises cohesive glacial tills underlain by sand/gravel on silt (with organics) on a layer of made ground. Bedrock comprising weathered limestone was encountered at depths between 13m and 22.3m bgl. No contaminated soil was encountered at the site. Huntstown Quarry to the south west of the site is a county geological site, designated because the limestone quarry face exposes the base of Tober Colleen, an important geological formation.

12.4.77. According to the GSI mapping, the aquifer classification is Li (locally important). The water quality status in the area is rated as 'good' and it is not considered at risk of deterioration. Groundwater varies from 2.6m to 10.1m in depth below ground across the site with groundwater flows towards the south west and stated to be influenced by the dewatering activities in the Huntstown quarry.

12.4.78. The GIS groundwater mapping classifies the groundwater vulnerability as 'Extreme' (<3m of overburden), though it is stated that the bedrock aquifer is in fact greater than 10m of low permeability glacial till and, accordingly, can be reclassified as 'low', which indicates that infiltration is low and runoff is high. There are no groundwater supply wells within a 10km radius of the site. It is submitted that the site has been determined as not suitable for quarry reserves.

Potential Impacts

12.4.79. There would be no alteration to the existing groundwater flow regime or impact on the available groundwater resource as a result of the development and I am satisfied that no such impacts would therefore arise.

12.4.80. Unsuitable material excavated for foundations and site levelling would be reused on

site for bunding and landscaping. Accordingly, no significant impacts are likely as a result of earthworks.

- 12.4.81. During construction and as a result of excavations, there is potential for an increase in aquifer vulnerability due to a reduction in depth of overburden in those construction and excavation areas and this may lead to potential for migration of contaminants (from accidental spills) to the underlying bedrock aquifer. However, due to the thickness of overburden, stated to be 19.3 m - 22.3 m, in the vicinity of the areas where excavations would occur and the low groundwater vulnerability classification based on site specific information, I am satisfied with the conclusion put forward by the applicant that the impact arising out of a reduction in overburden depth on the groundwater quality would be imperceptible.
- 12.4.82. During the operational phase, the development is not predicted to impact on the geological heritage site within Huntstown quarry. The impact on the groundwater resource due to loss in recharge area would be imperceptible. The impact of accidental spillages on soils is also assessed as imperceptible.
- 12.4.83. The development would also lead to indirect positive effects regarding land spreading by providing storage for periods when land spreading is not permitted (due to seasonal restrictions) and therefore ensuring avoidance of adverse environmental impacts on receiving waters in accordance with Nutrient Management Plans.

Mitigation Measures

- 12.4.84. For the construction phase, the overarching mitigation measure is the implementation of a CEMP, which would ensure good construction management and protection of the environment. A site-specific waste management plan would be required to be prepared and adhered to by the contractor. Measures set out in the CIRIA guidance document on 'control and management of water pollution from construction sites' are stated to be adhered to. Suitable excavated materials would be utilised for landscaping and screening bunds. No operational impacts are anticipated on the land, soils and hydrogeological environments and, as such, no specific mitigation is proposed with regard to the RBSF component.

Residual Impacts

- 12.4.85. I am satisfied with the conclusion drawn on the applicant's assessment that with mitigation in place, no negative impacts beyond imperceptible are predicted on land and soils for either the construction or operation phases of the RBSF component.

Monitoring

- 12.4.86. No monitoring is proposed, which I am satisfied is acceptable.

12.4.87. Water - RBSF component

Introduction and Existing Environment

- 12.4.88. A tributary of the Huntstown Stream, which itself is a tributary of the River Ward, borders the site to the west and south. The drainage from the Huntstown Quarry, located to the south west of the site, also feeds into this network. These are shown in Figure 4-1 (Proposed RBSF Site Location) within Section 4 of Volume 4 of the EIAR. There is a surface water pipe traversing the site in an east-west direction which drains an adjoining site. It is planned to relocate this pipe to allow for the development of the RBSF facility.
- 12.4.89. Water samples were taken from the stream adjoining the western boundary of the site to provide baseline data on the water quality upstream and downstream of the proposed discharge point for the surface water runoff from the proposed RBSF Component. The analysis revealed elevated calcium and sulphate concentrations, which it states is reflective of activities at Huntstown quarry, including cement leaching. It is concluded that the stream is already quite polluted at the upper perimeter of the proposed RBSF component site due to upstream pressures. This is at variance to the 'good' status assigned under the WFD, which it is stated is based on samples collected in the Ward River at Owens Bridge, located c. 1.7km downstream to the north east.

Potential Impacts

- 12.4.90. In the absence of control measures, potential impacts could arise during construction from an increase in suspended solids and pollutants reaching watercourses. During construction, no hydromorphological impacts are predicted on streams or rivers as

there are no proposals for excavations within or altering the receiving stream. During operation, it is submitted that no impacts would arise from fluvial flooding as the site is located in Flood Zone C (based on the Flood Risk Guidelines) and also no risk would arise from pluvial flooding as the drainage design would include attenuation measures resulting in no increase in the risk of pluvial flooding from the site. I have dealt with the issue of flood risk in greater detail within the Planning Assessment section of this report.

12.4.91. The main impact that could potentially arise on the receiving stream would be as a result of accidental spillages of chemicals, hydrocarbons or other contaminants entering the drainage system and discharging to the stream thereafter. Given the inherent control measures including hydrocarbon interceptors, silt traps/sedimentation and attenuation prior to discharge to the watercourse, impacts would be no greater than imperceptible in significance.

12.4.92. During operation, in the event of a fire, the firefighting water could become contaminated and enter the receiving water through the drainage system. The significance of this potential impact is predicted as slight negative and temporary in duration.

Mitigation

12.4.93. In the construction stage, the overarching measure proposed is the adherence to the site-specific CEMP and standard best practice such that would protect water quality. It is submitted that measures set out in the CIRIA on the 'control and management of water pollution from construction sites' would be implemented and that construction works in the vicinity of the stream on the western boundary of the site would be undertaken in accordance with the requirements of the IFI 'Guidelines on Protection of Fisheries during Construction Works in and Adjacent to Waters' (2016).

12.4.94. During operation, the drainage has been designed to follow best practice and includes mitigation measures embedded in the design in the form of attenuation, adoption of SuDS and incorporation of hydrocarbon interceptors to capture hydrocarbons / chemicals that might otherwise enter the adjoining receiving water. A shut-off valve is proposed to be installed on the outlet to the stream, which would be used to contain any contaminated runoff in the event of a major environmental

accident on site. In the event of a fire, water used for fire-fighting would be contained in the attenuation storage system.

Residual Impacts

- 12.4.95. I am satisfied that the residual impact on the hydrology and the receiving water environment following the implementation of this mitigation measure would be neutral and imperceptible.

Monitoring

- 12.4.96. No monitoring is proposed, which I am satisfied is acceptable.

- 12.4.97. **Air and Climate - RBSF component**

Introduction and Existing Environment

- 12.4.98. Baseline data and data available from similar environments indicates background concentrations in the vicinity of the RBSF as:

- Nitrogen dioxide (NO₂) = 29 µg/m³
- Particulates (PM₁₀) = 18 µg/m³
- Particulates (PM_{2.5}) = 11.9 µg/m³
- Benzene = 1 µg/m³
- Carbon Monoxide (CO) = 0.5 mg/m³

- 12.4.99. These all lie below the National and EU ambient air quality standards limits. Records of prevailing winds were examined from the nearest representative weather station at Dublin Airport, located 4.5 km east of the site.

Potential Impacts

- 12.4.100. Dust deposition arising from the construction phase has the potential to cause temporary slight local impacts at nearby residential properties within a 200m radius from the site. At the time of the applicant's assessment there were three residential properties located less than 50m from the proposed site along with two commercial premises located within 300m of the site. The risk of dust impacts arising from the

proposed RBSF component was assessed as being no greater than low. It is noted in the EIAR that subsequent to the assessment of Air and Climate, two of the three residential receptors (houses) were demolished and a residential development comprising eight houses and community building had since commenced. I accept, that as submitted by the applicant, this change would not alter the outcome of the assessment carried out.

- 12.4.101. Greenhouse gas emissions produced during the construction phase for the RBSF are expected to account for 0.00075% of Ireland's EU 2020 target and, therefore, impacts are stated would be imperceptible.
- 12.4.102. In the operational phase, I would agree that the transport of biosolids material would give rise to the greatest source of dust emissions with potential to impact on the nearby sensitive receptors including the existing houses and the residential development that is under construction. As the internal access roads are proposed to be paved, the overall risk of dust soiling is predicted to be low.
- 12.4.103. It is predicted that any potential impacts to climate as a result of the proposed operation phase of the RBSF component would be imperceptible. I note that solar panels are proposed to be incorporated on the roof of one of the buildings and would generate substantial portion (c.40%) of the energy requirements for the proposed RBSF component.

Mitigation Measures

- 12.4.104. During construction, a schedule of dust control measures has been incorporated into the CEMP and the adherence to the measures of the CEMP would be a requirement. Vehicles delivering biosolids material would be enclosed and the vehicles would have restricted speeds. Roads outside of the site are stated would be cleaned on an ongoing basis, as necessary.
- 12.4.105. During the operation phase, there is potential for dust emissions as a result of the storage of biosolids material. Measures taken to reduce the risk of dust impacts off-site would include loading and unloading of biosolids within sealed buildings and, if necessary, the establishment of a wheel-wash facility.
- 12.4.106. The impact of the proposed RBSF component on climate would be imperceptible,

therefore, no site-specific mitigation is proposed, which based on my assessment, is acceptable.

Residual Impacts

12.4.107. The assessment concludes that once dust minimisation measures are employed during construction and operation, impacts on the Air and Climate environment have been assessed to be insignificant as a result of the RBSF component. In addition, there are no residual impacts to air quality or climate envisaged as a result of the operation of the proposed RBSF Component.

Monitoring

12.4.108. During the construction phase of the Proposed RBSF Component monitoring of construction dust deposition would be put in place to ensure emissions are controlled.

12.4.109. **Noise and Vibration - RBSF component**

Introduction and Existing Environment

12.4.110. Baseline data for noise relating to the RBSF site was found to be typical of a suburban setting and close to a busy regional road network and aircraft flightpaths. The nearest noise sensitive receptors include the house and the residential units under construction to the south east of the site.

Potential Impacts

12.4.111. With employment of best practice, construction noise is expected to fall within acceptable noise limits set out in BS 5228-1:2009+A1:2014. Noise impact is therefore considered to be insignificant to slight negative and short term. It is submitted that construction related traffic noise would lie below the prevailing road traffic noise levels.

12.4.112. Vibration during the construction phase is not expected to result in any perceptible changes at the nearest receptors.

12.4.113. Increase in noise levels during the operation phase is predicted to be less than one dBA, which can be rated as insignificant.

12.4.114. Vibration during the operational phases is not expected to result in any perceptible changes at the nearest receptors and has been assessed as insignificant.

Mitigation Measures

12.4.115. All construction works would be required to be completed in accordance with best practice standards.

12.4.116. The contractor would be required to prepare and adhere to a Noise and Vibration Management Plan (NVMP), which would deal with measures concerning noise and vibration arising from the construction phase.

12.4.117. Noise would be required to meet the following limits at the nearest sensitive receptor during construction:

- 70 L_{Aeq} (1 hour) dB – Daytime (07:00 – 19:00) and Saturdays (07:00 – 13:00)
- 65 L_{Aeq} (1 hour) dB – Evening (19:00 – 23:00)
- 55 L_{Aeq} (1 hour) dB – Night time (23:00 – 07:00)

12.4.118. Mitigation for the operation phase would include a number of items such as selection of 'low noise' equipment and plant, vibration isolation mounts and appropriate siting of fixed plant. During the operational phase, noise arising from the facility would be required to achieve the following limits, when measured at the nearest noise sensitive receptor:

- 55 dB $L_{A,r,T}$ Daytime (07:00 to 19:00 hrs);
- 50 dB $L_{A,r,T}$ Evening (19:00 to 23:00 hrs);
- 45 dB $L_{A,r,T}$ Night-time (23:00 to 07:00 hrs).

Residual Impacts

12.4.119. The assessment concludes that once mitigation and best practice measures are employed during construction and operation, no negative impacts beyond imperceptible are predicted on the environment from noise and vibration emanating from the RBSF component as it is predicted that levels would all fall within appropriate limits.

Monitoring

12.4.120. A recommendation is put forward that the appointed contractor would monitor levels of noise and vibration at nearby sensitive locations and/or the proposed RBSF component site boundaries during the construction phase and at commissioning stage.

12.4.121. **Odour - RBSF component**

Introduction and Existing Environment

12.4.122. The area immediately surrounding the proposed RBSF site including the residential properties would be the most sensitive receptors to odour impacts. The wider area is largely considered to be free from odour-generating sources.

Potential Impacts

12.4.123. I am satisfied that there would not be any noticeable odour emissions during the construction phase of the development. All potential odour impacts are limited to the operational phase.

12.4.124. The material to be stored is that of treated, de-watered and stable biosolids in a manner that is highly regulated. It would be stored indoors under a controlled environment.

12.4.125. The applicant's odour assessment concluded that the odour effects would not be significant as odour concentrations at all receptor locations were identified as falling below $3 \text{ ou}_E/\text{m}^3$ as the 98th percentile of hourly averages.

Mitigation Measures

12.4.126. I am satisfied that no mitigation is required for the construction phase. During operation, the facility would employ an odour management regime that would ensure that physical systems and operational practices minimise the potential for odour emissions.

Residual Impacts

12.4.127. No residual impacts are predicted for the construction stage. During operation, the adopted odour annoyance criterion of $3 \text{ ou}_E/\text{m}^3$ as the 98th percentile of hourly

averages is not predicted to be exceeded at any receptor location, which is acceptable.

Monitoring

12.4.128. It is proposed to monitor odour sources at the RBSF during the operational phase to ensure that actual emissions do not exceed those predicted within the assessment. The monitoring would include Olfactometry testing.

12.4.129. **Conclusion on Land, Soils, Water, Air and Climate**

12.4.130. 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, proposed mitigation measures and measures within suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable significant direct, indirect or cumulative impacts on **Land, soils, water, air and climate**.

12.5. **Materials Assets, Cultural Heritage and Landscape**

12.5.1. **Material Assets - Ringsend WwTP**

Introduction and Existing Environment

12.5.2. The land around the Ringsend WwTP site comprises industrial and storage facilities. The Dublin Waste to Energy Plant lies immediately west of the site. The ESB power generation plant and Synergen Dublin Bay Power Plant are located proximate to the Ringsend WwTP. Dublin Port is located across the Liffey and existing passenger ship facilities at Alexandra Basin are currently being upgraded as part of a redevelopment programme.

12.5.3. The Poolbeg Peninsula is an important amenity used by members of the public for walking, cycling and water-based leisure activities. The Great South wall is a particular focus of leisure activity in the area. Clanna Gael Fontenoy GAA club, situated at Seán Moore Park lies c.1km from Ringsend WwTP. Irishtown athletics track and stadium are also close by, c.1.4km to the west. North of the bay there are recreational facilities and clubs in the Clontarf/Sutton/Howth area. Dublin Bay has become popular for water-based activities.

- 12.5.4. As stated earlier, the neighbouring site has been designated as the Poolbeg West 'Strategic Development Zone' (SDZ). Irishtown, Ringsend and Sandymount villages are the main residential and commercial areas within a two kilometre radius of the site. There are no residential areas or retail properties within 500 metres of the site.
- 12.5.5. The site is serviced by water, electricity, telecoms and gas utilities. The National Oil Reserves Agency manages Ireland's emergency oil stocks, through holding tanks at Pigeon House road, c.300 metres from the perimeter of Ringsend WwTP site.
- 12.5.6. The existing road network includes: Pigeon House road, Shellybanks Road, Whitebank road, South Bank road, R131 Seán Moore road, York Road, R131 East Link Bridge, North Wall Quay and East Link road. Traffic is described and impacts relating to traffic are assessed under the heading of Traffic, as set out in my Planning Assessment above.

Potential Impacts

- 12.5.7. During construction, the road network surface is predicted as experiencing a moderate short-term negative impact due to wear of road surfaces and periods of roadworks as a result of additional construction traffic anticipated. Impacts on the road network during operation has been assessed as having no greater than imperceptible impact.
- 12.5.8. Potential negative impacts on existing public utilities could arise due to the severing of existing utility networks (including electricity or gas) during the construction phase of the Proposed WwTP component, thus disrupting supply to the WwTP and to the surrounding facilities.
- 12.5.9. During operation, I am satisfied that potential for impacts on material assets would be no greater than imperceptible.
- 12.5.10. When completed the upgrade of the Ringsend WwTP would result in a significant long term positive impact, because of the provision of increased wastewater treatment capacity and the improved quality of treated effluent, thus facilitating future sustainable growth of the Greater Dublin Region.

Mitigation Measures

- 12.5.11. Mitigation measures would include the preparation and adherence to a Traffic Management Plan for the construction phase. Any damage arising to the road network is stated would be addressed in conjunction with Dublin City Council roads department. The appointed contractor would be required to engage with public utility providers in advance of any excavation in the vicinity of such services.
- 12.5.12. Apart from preparation of method statements to ensure public utilities are protected and communication with public utility providers ahead of construction, I would agree that no specific mitigation is required during the operation phase. Method statements would be developed during the construction phase to ensure underground services are well understood in advance of onsite excavations.

Residual Impacts

- 12.5.13. Following the implementation of mitigation measures, the residual impacts of the material assets arising out of the construction and operation phases of the proposed Ringsend WwTP component are stated to be no greater than imperceptible.
- 12.5.14. Significant positive remaining impacts on wastewater treatment would result.

Monitoring

- 12.5.15. No monitoring is proposed and I am satisfied that there is no such monitoring requirement in terms of material assets.
- 12.5.16. **Cultural Heritage - Ringsend WwTP component**

Introduction and Existing Environment

- 12.5.17. One protected structure, RPS Ref. 6794 (remnants of Pigeon House Fort) lies partially within the Ringsend WwTP site. There are three others in the vicinity of the site (the former Pigeon House Hotel RPS Ref. 6795, Pigeon House power station RPS Ref. 6796 and Great South Wall RPS Ref. 6798).
- 12.5.18. The area around Pigeon House Harbour to the east of the site is designated as a Conservation Area under the Dublin City Development Plan. A small area located between the principal WwTP and the storm tanks to the north is a designated Zone

of Archaeological interest.

- 12.5.19. There are two Recorded Monuments located partly within the Ringsend WwTP site which include DU019-027 (Dublin South City Blockhouse) and DU019-029002 (Dublin South City Sea wall).

Potential Impacts

- 12.5.20. Construction activities including excavations and vibrations from driving piled foundations could impact on Pigeon House Fort and Pigeon House Harbour. There is also potential to cause accidental vehicular damage to the structure of the Fort Wall. The access works within the interior of the Pigeon House Fort would require topsoil stripping for the access road and have the potential to uncover material associated with the fort. In addition, cranes would be located within the footprint of Pigeon House Fort and would require the placement of hardstanding materials which could impact on subsurface archaeological material. During construction, works in the area of construction compound C3 has the potential to cause accidental vehicular damage to a paved area east of Pigeon House power station.
- 12.5.21. The development is proposed to omit the construction of the undersea tunnel / LSOT and therefore, I am satisfied that no underwater survey is required for the current proposal. No potential impacts on cultural heritage during the operational phase of the proposed WwTP component have been identified.

Mitigation Measures

- 12.5.22. During construction, vibration from piling would not exceed allowable vibration limits for sensitive buildings. The walls of Pigeon House Fort would be protected with concrete barriers during construction. The site preparation within the interior of the Pigeon House Fort, including topsoil stripping for the access road and hardstanding areas, would be subject to archaeological monitoring which I propose should be strengthened by way of a planning condition.
- 12.5.23. As no impacts on cultural heritage are predicted during the operational phase, no mitigation measures are required or proposed, which is acceptable.

Residual Impacts

- 12.5.24. The assessment concludes that once mitigation measures are employed during the construction phase, no negative impacts are predicted on the cultural heritage as a result of the Ringsend WwTP component.

Monitoring

- 12.5.25. Certain aspects of construction work that could impact on Pigeon House Fort would be monitored by a suitably qualified archaeologist, as outlined under the mitigation measures above. Beyond this, no further monitoring is proposed.

12.5.26. **Landscape – Ringsend WwTP**

Introduction and Existing Environment

- 12.5.27. The proposed Ringsend WwTP component is located on the site of the existing Ringsend WwTP, which is on the Poolbeg peninsula. The site is of a low landscape and visual sensitivity and does not have any specific landscape or visual-related designations, however and as set out above, the peninsula is important as an amenity and recreational resource. The proposal would result in an extension to the existing wastewater utility. The existing facility is more readily visible from local views, including those from the nature park south of the plant and those from Shellybanks Road and Shellybanks beach to the east. A planted belt on a mound of c.3m high provides for a landscape and visual buffer along the majority of the eastern and northern boundaries of the Ringsend WwTP site.

- 12.5.28. Dublin Bay has been awarded Biosphere Designation by UNESCO and the site is located in an area known as a Transition Zone. No national landscape or visual designations pertain to the site. There are multiple policies and objectives contained in the Dublin City Development Plan 2016-2022 concerning landscape and visual amenities, including policies to maintain the character of the coastline and Dublin Bay.

Potential Impacts

- 12.5.29. Construction activity would be most visible from local areas adjoining the site. There would be views of construction activity and cranes during the construction phase,

which is planned for up to a 10-year period. Construction activities are normal in this area and I am satisfied that in terms of landscape and visual impacts, these can be rated for the most part as slight short-term impacts at a local level along the adjoining public roads. The use of the southern construction compound area, C1, could give rise to temporary slight to moderate landscape and visual impacts to Irishtown Nature park to its south. The formation of a new entrance off Pigeon House Road would require the removal of a small area of semi-mature planting, which I consider would give rise to slight visual impact at a local level. Moving away from the site, the proposed development would result in imperceptible landscape and visual impacts.

- 12.5.30. During the operation stage, new structures would be consistent with the character of the existing development. Some new structures including the proposed phosphorous facility measuring c. 40m x 20m x 20m in height would be visible from Irishtown Nature Park and from Shellybanks Road/Beach. I have examined the photomontages presented from nine viewpoints. I am satisfied that where views of the development would be discernible, these would continue to be consistent with the current WwTP facility. The site is for the most part characterised by heavy industrial and port uses and the proposed WwTP component would not have any other direct impacts on landscape or visual character of the area.

Mitigation

- 12.5.31. During construction, screening is proposed to be erected/maintained in place on the southern and eastern site boundaries and around temporary compounds, which I am satisfied would also serve as a security barrier. Existing trees and shrub planting located along Pigeon House Road is proposed to be retained and protected. Additional shrubs and trees would be added in accordance with a landscape plan and I propose that such a requirement would be attached by way of a planning condition in the event of a grant of planning.
- 12.5.32. Following construction, all construction compound areas are stated would be required to be fully reinstated.
- 12.5.33. For the operational phases, proposed landscape works would be maintained and replaced as necessary.

Residual Impacts

- 12.5.34. It is concluded in the assessment that once planting is reinstated and matures, the residual landscape and visual effects would be imperceptible in the wider area post construction. Locally, some degree of visual change would be discernible, however, this would continue to be consistent with the existing visual environment.
- 12.5.35. I would therefore conclude that the landscape and visual impact resulting from the proposed development would be imperceptible and acceptable.

Monitoring

- 12.5.36. No monitoring is proposed.

12.5.37. **Material Assets - RBSF**

Introduction and Existing Environment

- 12.5.38. The area in the vicinity of the proposed RBSF is within a mix of agricultural and industrialised areas, interspersed with commercial and residential properties, including those under construction.
- 12.5.39. Public utilities such as water, telecoms and partially developed foul and surface water drainage networks exist on the site and both a 38 kV and a 110 kV electricity supply lines traverse the site. A gas transmission line has been completed to serve the adjacent Huntstown Power station, but this line lies outside of the RBSF site. The site is 1.5 km west of Dublin Airport. Recreational facilities and amenities within the immediate area are limited and include the Ward River, three golf clubs and St. Margaret's GAA club. Swords lies c.10 km from the site and Ashbourne is c.12 km from the site.

Potential Impacts

- 12.5.40. There is a temporary negative impact predicted on the road network surface quality and minor roadworks during construction due to HGV traffic. Traffic is further considered under my planning assessment above. Negative impacts are not predicted on land utilisation, utilities, water and drainage infrastructure during the construction phase.

12.5.41. During operation, potential for impacts on material assets would be no greater than imperceptible.

Mitigation Measures

12.5.42. During the construction phase, mitigation measures proposed include the preparation and adherence to a Traffic Management Plan for the construction phase. Specific wheel-washing facilities are proposed to be installed on site, to allow all HGVs exiting the site to be cleaned prior to leaving site. The appointed contractor would be required to prepare and adhere to a contract-specific Construction Environmental Management Plan (CEMP). Method statements on the detection of underground services and drainage infrastructure and the protection of such services would also be a requirement.

12.5.43. During operation, wheel-wash facilities are proposed to be installed and all HGVs would be cleaned prior to leaving the site.

Residual Impacts

12.5.44. Once mitigation measures have been implemented, no negative residual impacts are predicted on material assets during the construction or operation phases for the RBSF component.

Monitoring

12.5.45. No monitoring is proposed and I am satisfied that none is required.

12.5.46. **Cultural Heritage - RBSF Component**

Introduction and Existing Environment

12.5.47. There are no protected structures within the site. There is one such structure within the study area, the remains of Kilshane Motte (Ref: 0662), which was demolished in 1952. The site has been assessed for archaeology by the carrying out of test excavations and no archaeological material was identified.

12.5.48. The closest recorded monument to the application site is Newtown Castle, a Motte and Bailey (RMP DU014-013), located 30m north of the site. It is stated to have been demolished in 1952 and now survives as a cropmark and central raised oval area.

Other recorded monuments are located beyond 200m of the site and these are considered to be too far from the site to be impacted on.

- 12.5.49. There are two undesignated monuments, i.e. Sites and Monuments recorded (SMR) sites, outside of the site, but within the study area, the closest of which is a Ring-ditch in Newtown townland (SMR DU014-0100---). This monument is situated 560m north-east of the Site and I am satisfied that it is too far distant to be impacted by the proposed RBSF Component.

Potential Impacts

- 12.5.50. The construction or operational phases would not have direct impacts on any items of cultural heritage, archaeology or heritage interest on site or in the vicinity of the Proposed RBSF Component. The main storage buildings within the overall development site would be situated greater than 100m south of the neighbouring Motte and Bailey, which would be protected by a landscape buffer zone and no impact is therefore likely.

Mitigation measures

- 12.5.51. As no impacts (direct or indirect) have been identified following assessment, no mitigation measures during construction or operational phases are proposed, which I am satisfied is acceptable.

Residual Impacts

- 12.5.52. No negative residual impacts are predicted for the RBSF component.

Monitoring

- 12.5.53. No monitoring is deemed to be required.

- 12.5.54. **Landscape and Visual - RBSF Component**

Introduction and Existing Environment

- 12.5.55. The landscape at the RBSF Component site is relatively flat and open and surrounding land uses include industrial and business developments with houses to the south east adjoining the site. The site is zoned 'HI' in the Fingal Development Plan with a corresponding objective to provide for heavy industry uses. The

proposed site has no specific landscape or visual designations in the Fingal Development Plan 2017-2023. The site was previously partly developed and the proposed construction works would not be out of the ordinary in this utility/industrial landscape setting.

Potential Impacts

- 12.5.56. During construction, visual impacts have been assessed as significant and temporary from the adjacent houses on the R135. Visual impacts on passing views from elevated sections of the N2 are assessed as slight negative for the construction phase. It is submitted, and I would agree, that the works would be consistent with the nature and scale of works that would be expected to arise in any event as a result of the landuse zoning for the proposed site and its environs.
- 12.5.57. Construction works would not have any impact on landscape character, landscape setting, or on views away from the immediate site boundaries or from nearby elevated sections of the N2.
- 12.5.58. In the longer term, while the buildings would be prominent initially, once planting matures and given that buildings of such a nature would not be out of character, I am satisfied that the development would read as part of the emerging and developing landscape.

Mitigation

- 12.5.59. During construction, hoarding (2.4m in height) is proposed to be erected adjoining the sensitive houses, including housing under construction, and construction compounds would be kept away from the south-eastern corner. Landscape measures including a low-level landscaped berm and extensive planting would be completed as part of the construction works. Landscaping would be augmented and managed during the operation phase. Lighting standards are stated to be fitted with horizontal cut-off fittings to avoid light spill.

Residual Impacts

- 12.5.60. No negative residual landscape or visual impacts are predicted for the RBSF component either during construction or operation. The RBSF component would be consistent with the existing land use zoning for the site.

Monitoring

12.5.61. During construction, landscape works are proposed to be monitored by a qualified landscape architect.

12.5.62. **Conclusion on Material Assets, Cultural Heritage and Landscape**

12.5.63. 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, proposed mitigation measures and measures within suitable conditions. I am therefore satisfied that the proposed development would not have any unacceptable significant direct, indirect or cumulative impacts on **Material Assets, Cultural Heritage and Landscape**.

12.6. **Vulnerability of projects to Major Accidents and/or Natural Disasters**

12.6.1. The EIA Directive requires consideration on the vulnerability of projects to major accidents and/or natural disasters. This is considered in Section 15 of Volumes 3 (Ringsend WwTP component) and 4 (RBSF component) in the EIAR under the heading of Risk Management. Drawing from the information available and the requirements of the EIA Directive, this matter is considered under.

12.6.2. **Ringsend WwTP component**

12.6.3. At the Ringsend WwTP site, risks of major accident and / or natural disasters could include:

- Damage or breakdown leading to a plant shutdown during construction or operation leading to direct untreated effluent discharge to sensitive waters
- Fire or explosion resulting in significant or widespread damage, including environmental damage on site;
- Incident at adjacent Seveso sites or caused by activities in the harbour and port area leading to shutdown of the WwTP during construction stage;
- Highly-concentrated toxic influent discharged into Ringsend WwTP Network resulting in WwTP shutdown due to breakdown of biological treatment process.

- 12.6.4. While risk of traffic collisions has also been included by the applicant, I am satisfied that such risks are governed by both construction safety and road safety legislation and noting construction safety requirements and traffic management, they would not fall within the specific category envisaged for the consideration on the vulnerability of this element of the project to major accidents and/or natural disasters. I have therefore excluded these from this aspect of this section of my assessment. Traffic impacts including impacts on road safety have been considered in the planning assessment section of this overall report. It is of relevance to also note that when compared to the LSOT option approved and which is now proposed to be omitted.
- 12.6.5. It is put forward in the Risk Assessment that the vulnerability of the Ringsend WwTP to major accident or natural disasters would be medium due to its location proximate to Seveso establishments. I have excluded risk from coastal flooding having regard to the conclusions reached in my assessment of Flood Risk in the planning assessment above that the Ringsend WwTP component would not have any noticeable impact on the existing flood regime.
- 12.6.6. Mitigation measures include those inherent in the project design, fire safety and emergency response plans and safety management systems and environmental incident response plan are outlined. Storm tanks would provide short term storage of effluent discharge. Mitigation considered relevant also includes the Dublin City Council Major Emergency Plan 2010 and the Dublin Port Emergency Management Plan 2013.
- 12.6.7. Post mitigation, the likelihood of risks from each of the above fall into the categories of 'unlikely' and 'very unlikely'. Having reviewed the information on file, I am satisfied that risks from major accident and/or natural disaster and their consequences have been adequately considered. It is the applicant's conclusion that post mitigation, the vulnerability of the Ringsend WwTP component to major and / or natural disasters accidents would remain as medium due to the site location adjacent to a Seveso establishment. I would be inclined to conclude that the adjoining Seveso establishment and others in the area would be operated in accordance with the Seveso / COMAH regulations and I have dealt with this in more detail under the heading of 'Seveso Considerations' in my Planning Assessment above. Given that the proposed site is not itself a Seveso establishment I would therefore rate the

vulnerability as low. I also note and agree with the findings of the assessment that the proposed works would not alter the risk profile of the site or the adjacent Seveso sites, which are regulated under Seveso/COMAH regulations.

- 12.6.8. It is submitted that activities on site would be monitored to ensure risk does not increase over time at the site. In conclusion, I am satisfied that the risk of a major accident or natural disaster have both been adequately considered and given the nature of the development, the low probability of such an occurrence and the mitigation measures proposed, it is not likely that significant effects on the environment would arise in this regard.
- 12.6.9. **RBSF component**
- 12.6.10. Risks of major accident and / or natural disasters identified which would result in a medium risk score (pre-mitigation) have been identified to include:
- Fire resulting in significant or widespread damage on site;
 - Damage to high voltage overhead powerlines crossing the site.
- 12.6.11. Similar to my considerations of the Ringsend WwTP development, I have excluded traffic collisions for the consideration of accidents and/or natural disasters, noting that these risks are governed by separate legislation in terms of construction safety and road safety and are considered in the traffic section of the planning assessment section above.
- 12.6.12. Mitigation measures include those inherent in the design of the RBSF component design, including fire safety and emergency response plans, safety management systems, adequate water supply for fire-fighting and preparation and adherence to an environmental incident response plan.
- 12.6.13. Post mitigation, the likelihood of risks of each of the above fall into the categories of 'unlikely' and 'very unlikely'. Having reviewed the information on file, I am satisfied that risks of major accident and their consequences have been adequately considered and post mitigation, the vulnerability of the RBSF Component to major and / or natural disasters would be low.
- 12.6.14. It is submitted that activities on site would be monitored to ensure risk does not

increase over time at the site.

12.7. **Environmental Interactions**

- 12.7.1. Environmental interactions are addressed within each of the individual sections of both EIAR Volumes 3 and 4 and mitigation and environmental standards are recommended.
- 12.7.2. Table 16-1 (Summary of Interactions) tabulates the interactions, providing a useful tool in understanding the interactions likely to arise with a summary of same provided in Section 16.2 of both Volume 3 (Ringsend WwTP component) and Volume 4 (RBSF component) of the EIAR. For example, water has potential to interact with other environmental factors such as biodiversity, material assets and population and human health. The potential arises for population and human health to interact with all of the other factors (biodiversity, land, soil, water, air and climate, material assets, cultural heritage and the landscape). I have examined the interactions throughout each section of the EIAR for the development proposed at each of the Ringsend WwTP (set out in Volume 3) and RBSF components (set out in Volume 4). I am satisfied that the EIAR documents has satisfactorily addressed interactions. I am also satisfied that the proposed development, including both components, is not, in my view, likely to result in significant adverse impacts in terms of the interaction of individual environmental factors.

12.8. **Cumulative Impacts**

- 12.8.1. Cumulative impacts have been undertaken by each specialist and addressed in each section of the EIAR across Volumes 3 and 4. The assessment focussed on where the impacts of the proposed development have been assessed to be of slight significance or worse, but when combined with the impact of other concurrent or future developments the overall impact may worsen. Where such impacts are identified, additional mitigation measures may be required.
- 12.8.2. Cumulative impacts considered in respect of the Ringsend WwTP in combination with other projects in the area include: discharges to the Liffey Estuary and Dublin Bay, as well as noise, odour, traffic and air quality. Projects that were considered

include: Dublin Waste to Energy, Alexandra Basis Redevelopment, ESB Site Poolbeg Power station, National Oil Reserves Agency, Greater Dublin Drainage and the Poolbeg West SDZ. The EIAR considered cumulative impacts arising from both the construction and operational phases of the Ringsend WwTP component in accordance with the EIA Directive.

- 12.8.3. When all impacts are examined in combination with other projects in the local area and beyond, it is submitted that the proposed upgrade project is not likely to give rise to any significant environmental effects in combination with existing and/or permitted projects in the area.
- 12.8.4. The RBSF was considered in combination with other projects in the area and cumulative impacts are stated to include noise, odour, traffic and air quality.
- 12.8.5. Projects that were considered with respect of the RBSF include: Huntstown Quarry, Huntstown Power Station, Dublin Airport Authority development, Huntstown BioEnergy Limited and the Greater Dublin Drainage project.
- 12.8.6. The cumulative assessment for the RBSF also considered cumulative elements from the GDD project and the proposed Ringsend WwTP Upgrade projects and the existing and/or approved projects associated with the NWSMP.
- 12.8.7. It is also of note that the assessment itself considered the entire project referred to as the 'proposed upgrade project' meaning the totality of the proposed development and the elements of the 2012 approval being progressed.
- 12.8.8. When all impacts are examined in combination with other projects in the local area and beyond, it is submitted that the proposed RBSF is not likely to give rise to any significant cumulative effects when taken in combination with existing and/or permitted projects in the area, including those outlined above. It is also submitted that the proposed RBSF component has been designed to accommodate the biosolids volumes from both the GDD WwTP and the proposed Ringsend WwTP upgrade project components, in a manner that would not give rise to significant environmental effects on the environment.
- 12.8.9. Having reviewed the information on file and considered all of the impacts identified

above, I am satisfied that the proposed upgrade project incorporating the proposed development would not give rise to any unacceptable significant cumulative effects on the environment.

12.9. Conclusion on EIA

12.9.1. I have carried out an examination of environmental information contained above in which I have had regard to the EIAR and supplementary information provided by the applicant and the reports and submissions from Planning Authorities, prescribed bodies and observers in the course of the application. Following on from this assessment, it is considered that the main significant direct and indirect effects (positive and negative) of the proposed development on the environment are those arising from the impacts listed below. A Construction Environmental Management Plan (CEMP) is the overarching general mitigation embedded in the project design and delivery for the construction stage. In addition, plans relating to Waste Management, Invasive Species Management, Traffic Management, Monitoring Plans and Emergency Response Plans are also proposed. The remaining impacts, both positive and negative likely to arise on such as would potentially give rise to significant effects on the environment are:

- Benefits/positive impacts to **population and human health** arising as a result of the overall project upgrade due to providing increased treatment infrastructural capacity and improved level of treatment which would improve compliance with EU Directives and corresponding legislation and would be pivotal in supporting planned residential and economic growth in Dublin city and the region.
- Negative temporary impact on **population and human health** (recreational swimmers/water based sporting activities) because of a deterioration in water quality during a nine-month period of decommissioning of aspects of the WwTP (during construction) and a corresponding temporary loss of recreational amenity which would be partially mitigated by carrying out the works in winter period when the recreational water based activities are at seasonally low levels;

- Benefits/positive impacts on the environment (**soils, traffic, water quality, climate**) as a result of reduction in excavation and truck movements (estimated to be 70,000 HGV movements over an 18-month period) which would otherwise have been required to remove and transport rock and spoil during the construction phase of the undersea tunnel. During the operation phase, the proposal to omit the tunnel and associated diffuser point 9 km out to sea would also mean that there would be no deterioration of water quality at this location.
- Impacts arising on **land and soils** as a result of spread of invasive species (Japanese Knotweed) present on the Ringsend wastewater treatment site and which would be mitigated by the preparation and implementation of an Invasive Species Management Plan and method statement for the control of disturbance of soils containing Japanese Knotweed and the requirement that a suitably qualified ecologist would be engaged to oversee the implementation of the Invasive Species Management Plan and monitor the success of the mitigation measures post-construction;
- Risk of pollution of **receiving water environment** as a result of accidental spillages of chemicals, hydrocarbons or other contaminants entering the drainage system and discharging to the stream thereafter during the construction and operational phases. The impacts would be mitigated by measures within a Construction and Environmental Monitoring Plan (CEMP) and adherence to best practice construction measures and incorporation of appropriate drainage facilities. Measures set out in the CIRIA guidance document on 'control and management of water pollution from construction sites' would be implemented. The guidelines provided by the Inland Fisheries Ireland (2016) on the protection of fisheries habitats during construction projects would also be adhered to.
- **Noise** impacts for the construction and operation phases which would be mitigated by the requirements to prepare and adhere to the Noise and Vibration Management Plans (NWMP) and comply with appropriate noise and vibration limits which are set out in the EIAR in respect of the development at Ringsend wastewater treatment plant and the development of the regional

biosolids facility.

- **Odour impacts** for the operational phase which would be mitigated by the following:
 - Ringsend WwTP: odour from the wastewater treatment plant (excluding storm tanks) would be required not to exceed 10 ouE/m³ as the 99.4th percentile of hourly averages at the boundary of the Ringsend WwTP site. The adopted odour annoyance criterion of 3 ouE/m³ as the 98th percentile of hourly averages would not be exceeded at any sensitive receptor location. The Odour Management Plan would be updated as necessary and implemented to ensure the above standard is achieved during construction and operation.
 - RBSF: The adopted odour annoyance criterion of 3 ouE/m³ as the 98th percentile of hourly averages would not be exceeded at any sensitive receptor location.

13.0 **Appropriate Assessment**

13.1. **Introduction**

- 13.1.1. Special Areas of Conservation (SACs) / candidate Special Areas of Conservation (cSACs) and Special Protection Areas (SPAs) are part of the Natura 2000 network considered to be of international importance. In the Irish context, they are referred to as European sites. SACs/cSACs are designated under the EU Habitats Directive (92/43/EEC). SPAs are designated under the EU Birds Directive (79/409/EEC) amended by EU Directive 2009/147/EC. Article 6(3) of the Habitats Directive requires that any plan or project not directly connected with or necessary to the management of a European site, but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site(s) in view of the site(s) conservation objectives. The Habitats Directive has been transposed into Irish law by the European Union (Birds and Natural Habitats) Regulations 2011, as amended, the later which consolidates earlier Regulations.

13.1.2. In accordance with these requirements and noting the Board's role as the competent authority who must be satisfied that the proposal would not adversely affect the integrity of the European sites, this section of my report assesses in view of best scientific knowledge, if the project, individually or in combination with other plans or projects, is likely to have a significant effect on any European Site, in view of the sites' conservation objectives.

13.1.3. The applicant submitted an Appropriate Assessment (AA) Screening Report and a Natura Impact Statement and I refer to both of these documents in my assessment below, as well as drawing from information on relevant European sites available from the NPWS website and other documentation, including the EIAR, submitted with the planning application. I am satisfied that the information submitted is sufficient to allow the Board to carry out an AA. The NPWS were evidently consulted by the applicant at scoping stage in which issues of relevance were discussed. During the course of the application, the wider DCHG were consulted and I note that no response was received in respect of the European sites.

13.1.3.1. Count data from the Irish Wetland Bird Survey (I-WeBS) 2013/14 and information from the Waterbird Survey Programme of 2011/12 (NPWS, 2014) were used by the applicant as was data from the Dublin Bay Birds Project carried out by BirdWatch Ireland with support from Dublin Port Company (2013-2016).

13.1.3.2. Field surveys of the habitats on the construction site and immediate surrounds were undertaken in 2015 and 2016 (Ringsend WwTP) and 2017 (RBSF). A biological survey of the stream that borders the RBSF site was undertaken in December 2017 and a breeding bird survey of the RBSF site was undertaken in May 2018.

13.2. **Appropriate Assessment - Stage 1 (Screening)**

13.2.1. In relation to Stage 1 screening, the issue to be addressed is whether the project is likely to have a significant effect, either individually or in combination with other plans and projects on European sites in view of the sites' conservation objectives.

13.2.2. A description of the proposed development is set out in Section 4 of this report. In essence, it would comprise revised upgrade works at Ringsend WwTP and the construction of the RBSF at Newtown in North Dublin.

13.2.3. In deciding on the zone of influence of the proposal, guidance contained in 'Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities, DoEHLG 2009' recommends that 'the distance should be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects'. The applicant refers to its use of the Source-Pathway-Receptor model in order to determine the geographic extent to which the proposed development may result in the rise of significant effects. The 'source' of impact was identified as comprising activities or emissions that may be associated with the construction and operation of the proposed development. Receptors are European sites or their qualifying interests for which conservation objectives have been set and the pathway is that which exists between the source and receptor, for instance waterbodies connecting the proposed development to a European site. I would agree with the applicant's assertion that the likelihood for significant effects depends upon the characteristics and relationship between all three elements (Source, Receptor and Pathway) and that the presence of a pathway does not automatically mean that significant effects would arise.

13.2.4. **European Sites: Component 1 - Ringsend WwTP**

13.2.5. With regard to the Ringsend WwTP component, a zone of influence of 10 km was chosen. It is stated that this has been determined following examination of the EIAR that accompanied the planning application together with the NPWS maps and datasets. It is also stated that the zone of influence was considered appropriate having regard to objective information such as output from water quality models and construction noise estimates. In this regard, I have examined the water quality models presented in the EIAR which are also provided in Appendix 2 of the Appropriate Assessment Screening and NIS Report. Regarding construction noise, it has been estimated that construction may be audible for a distance of 2.5km from the site. A 10km buffer was applied to cater for all other identified potential significant effects. Having regard to the output from the water quality models and to audible noise distances referred to above, I am satisfied that the 10km distance around the WwTP and its associated existing effluent outfall which was selected as the zone of interest to be reasonable in this instance. A map showing the zone of influence of the

WwTP component and the European sit boundaries is presented in Fig 1 in the applicant's Appropriate Assessment Screening report and NIS.

13.2.6. The applicant listed eight European sites within this 10-km zone of influence around the Ringsend WwTP and its associated outfall, comprising four cSACs and four SPAs All of the sites are located either wholly or partly within Dublin Bay and include the following:

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

13.2.7. In addition, and noting that both Baldoyle SPA (site code 004016) and Baldoyle cSAC (site code 000199) are located 7.6km NE from the Ringsend WwTP component and therefore within the selected 10km zone of influence selected, I also propose to include these two sites in my assessment.

13.2.8. Table 5 below sets out details of each of the 10 sites including conservation objectives set out on the NPWS website at the time of carrying out this assessment together with listed qualification interests, the distance and location of the site relative to the Ringsend WwTP and the connectivity using the source-pathway-receptor model. The consequent potential for significant adverse effects on each of the sites having regard to the sites' conservation objectives is also included. Where marked with an astrix (*) this indicates that those qualification interests are a priority habitat under the Habitats Directive.

Table 5 – Relevant European sites for the purposes of Appropriate Assessment Screening (Component 1 – Ringsend WwTP).

European site (SAC/SPA)	Conservation Objectives and Qualifying Interests (Habitats and Species)	Distance of European Site to WwTP	Connectivity (Source-Pathway-Receptor) with potential to result in significant adverse effects.
<p>South Dublin Bay and River Tolka Estuary SPA (004024)</p>	<p>Conservation Objectives Version 1.0 (09/03/2015)</p> <p>To maintain the favourable conservation condition of (qualifying interests individually listed) in South Dublin Bay and River Tolka Estuary SPA, which is defined by a list of attributes and targets.</p> <p>Qualifying Interests: A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i> A130 Oystercatcher <i>Haematopus ostralegus</i> A137 Ringed Plover <i>Charadrius hiaticula</i> A141 Grey Plover <i>Pluvialis squatarola</i> A143 Knot <i>Calidris canutus</i> A144 Sanderling <i>Calidris alba</i> A149 Dunlin <i>Calidris alpina</i> A157 Bar-tailed Godwit <i>Limosa lapponica</i> A162 Redshank <i>Tringa totanus</i> A179 Black-headed Gull <i>Chroicocephalus ridibundus</i> A192 Roseate Tern <i>Sterna dougallii</i> A193 Common Tern <i>Sterna hirundo</i> A194 Arctic Tern <i>Sterna paradisaea</i> A999 Wetlands</p>	<p>Directly adjacent to the proposed works (south and east)</p>	<p>Potential for Direct Effects – Yes</p> <p>Potential for Indirect Effects – Yes</p>
<p>South Dublin Bay cSAC (000210)</p>	<p>Conservation Objectives Version 1.0 (22/08/13)</p> <p>To maintain the favourable conservation condition of mudflats and sandflats not covered by seawater at low tide in South Dublin Bay SAC which is defined by a list of</p>	<p>Adjacent (south and east)</p>	<p>Potential for Direct Effects – No</p> <p>Potential for Indirect Effects – Yes</p>

	<p>attributes and targets.</p> <p>Qualifying Interests: 1140 Mudflats and sandflats not covered by seawater at low tide</p>		
North Bull Island SPA (004006)	<p>Conservation Objectives Version 1.0 (09/03/2015)</p> <p>To maintain the favourable conservation condition of (qualifying interests individually listed) in North Bull Island SPA, which is defined by a list of attributes and targets.</p> <p>Qualifying Interests: A046 Brent Goose <i>Branta bernicla hrota</i> A048 Shelduck <i>Tadorna tadorna</i> A052 Teal <i>Anas crecca</i> A054 Pintail <i>Anas acuta</i> A056 Shoveler <i>Anas clypeata</i> A130 Oystercatcher <i>Haematopus ostralegus</i> A140 Golden Plover <i>Pluvialis apricaria</i> A141 Grey Plover <i>Pluvialis squatarola</i> A143 Knot <i>Calidris canutus</i> A144 Sanderling <i>Calidris alba</i> A149 Dunlin <i>Calidris alpina alpina</i> A156 Black-tailed Godwit <i>Limosa limosa</i> A157 Bar-tailed Godwit <i>Limosa lapponica</i> A160 Curlew <i>Numenius arquata</i> A162 Redshank <i>Tringa totanus</i> A169 Turnstone <i>Arenaria interpres</i> A179 Black-headed Gull <i>Chroicocephalus ridibundus</i> A999 Wetlands</p>	1.7 km north west	<p>Potential for Direct Effects – No</p> <p>Potential for Indirect Effects – Yes</p>
North Dublin Bay cSAC (000206)	<p>Conservation Objectives Version 1.0 (06/11/13)</p> <p>To maintain the favourable conservation condition of (qualifying interests individually listed) in North Bull Bay cSAC,</p>	1.7km from the WwTP outfall	<p>Potential for Direct Effects – No</p> <p>Potential for Indirect Effects – Yes</p>

	<p>which is defined by a list of attributes and targets.</p> <p>Qualifying Interests: 1140 Mudflats and sandflats not covered by seawater at low tide 1210 Annual vegetation of drift lines 1310 <i>Salicornia</i> and other annuals colonising mud and sand 1330 Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) 1395 Petalwort <i>Petalophyllum ralfsii</i> 1410 Mediterranean salt meadows (<i>Juncetalia maritimi</i>) 2110 Embryonic shifting dunes 2120 Shifting dunes along the shoreline with <i>Ammophila</i> (white dunes) 2130 Fixed coastal dunes with herbaceous vegetation (grey dunes)* 2190 Humid dune slacks</p>		
Howth Head Coast SPA (004113)	<p>Conservation Objectives Generic Version 6.0 (21/02/2018)</p> <p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA</p> <p>Qualifying Interests: A188 Kittiwake (<i>Rissa tridactyla</i>)</p>	c. 9 km north west	<p>Potential for Direct Effects – No</p> <p>Potential for Indirect Effects – Yes</p>
Howth Head cSAC (000202)	<p>Conservation Objectives Version 6.0 (06/12/2016)</p> <p>To maintain the favourable conservation condition of (qualifying interests individually listed) in Howth Head SAC, which is defined by a list of attributes and targets:</p> <p>Qualifying Interests: 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts 4030 European dry heaths</p>	c.7.0 km north west.	<p>Potential for Direct Effects – No</p> <p>Potential for Indirect Effects – No</p>

<p>Dalkey Islands SPA (004172)</p>	<p>Conservation Objectives Generic Version 5.0 (21/02/18)</p> <p>To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.</p> <p>Qualifying Interests: A192 Roseate Tern <i>Sterna dougallii</i> A193 Common Tern <i>Sterna hirundo</i> A194 Arctic Tern <i>Sterna paradisaea</i></p>	<p>c. 9.0 km south west</p>	<p>Potential for Direct Effects – None</p> <p>Potential for Indirect Effects – Yes</p>
<p>Rockabill to Dalkey Island SAC (003000)</p>	<p>Conservation Objectives Version 1.0 (07/05/13)</p> <p>To maintain the favourable conservation condition of (qualifying interests individually listed) in Rockabill to Dalkey Island SAC, which is defined by a list of attributes and targets:</p> <p>Qualifying Interests: Annex I Habitats 1170 Reefs</p> <p>Annex I Species 1351 Harbour porpoise <i>Phocoena phocoena</i></p>	<p>c. 6.2 km from the outfall</p>	<p>Potential for Direct Effects – None</p> <p>Indirect Effects – Yes</p>
<p>Baldoyle Bay SPA (004016)</p>	<p>Conservation Objectives Version 1.0 (27/02/13)</p> <p>To maintain the favourable conservation condition of the waterbird population and wetland habitat in Baldoyle Bay SPA, which is defined by a list of attributes and targets:</p> <p>Qualifying Interests: A046 Brent Goose <i>Branta bernicla hrota</i> A048 Shelduck <i>Tadorna tadorna</i> A137 Ringed Plover <i>Charadrius hiaticula</i></p>	<p>7.0 km NE</p>	<p>Potential for Direct Effects – No</p> <p>Potential for Indirect Effects – No</p>

	A140 Golden Plover <i>Pluvialis apricaria</i> A141 Grey Plover <i>Pluvialis squatarola</i> A157 Bar-tailed Godwit <i>Limosa lapponica</i> A999 Wetlands		
Baldoyle Bay cSAC (000199)	<p>Conservation Objectives Version 1.0 (19/11/12)</p> <p>To maintain the favourable conservation condition of (qualifying interests individually listed) in Baldoyle Bay SAC, which is defined by a list of attributes and targets:</p> <p>Qualifying Interests: 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonizing mud and sand 1330 Atlantic salt meadows <i>Glauco-Puccinellietalia maritimae</i> 1410 Mediterranean salt meadows <i>Juncetalia maritimi</i></p>	7.0 km NE	<p>Potential for Direct Effects – No</p> <p>Potential for Indirect Effects – No</p>

13.2.9. European Sites: Component 2 - RBSF

13.2.10. In respect of the RBSF component, the applicant identified three European sites comprising one cSAC and two SPAs within the 10km zone of influence of the RBSF. The sites are presented in Figure 2 of the Appropriate Assessment Screening and NIS and listed as follows:

- South Dublin Bay and River Tolka Estuary SPA (site code 004024)
- Malahide Estuary cSAC (site code 000205)
- Malahide Estuary SPA (site code 004025)

13.2.11. Table 6 below sets out details of each of the three sites including conservation objectives as contained on the NPWS website at the time of carrying out this assessment, together with listed qualification interests, the distance and location of the site relative to the RBSF site and the connectivity using the source-pathway-receptor model. The consequent potential for significant adverse effects on each of

the sites is also included.

13.2.12. Table 6 – Relevant European sites for the purposes of Appropriate Assessment Screening (Component 2 – RBSF).

European site (SAC/SPA)	Conservation Objectives and Qualifying Interests (Habitats and Species)	Distance of European Site to WwTP	Connectivity (Source-Pathway-Receptor) with potential to result in significant adverse effects.
<p>South Dublin Bay and River Tolka Estuary SPA (004024)</p>	<p>Conservation Objectives Version 1.0 (09/03/2015)</p> <p>To maintain the favourable conservation condition of (qualifying interests individually listed) in South Dublin Bay and River Tolka Estuary SPA, which is defined by a list of attributes and targets.</p> <p>Qualifying Interests: A046 Light-bellied Brent Goose <i>Branta bernicla hrota</i> A130 Oystercatcher <i>Haematopus ostralegus</i> A137 Ringed Plover <i>Charadrius hiaticula</i> A141 Grey Plover <i>Pluvialis squatarola</i> A143 Knot <i>Calidris canutus</i> A144 Sanderling <i>Calidris alba</i> A149 Dunlin <i>Calidris alpina</i> A157 Bar-tailed Godwit <i>Limosa lapponica</i> A162 Redshank <i>Tringa totanus</i> A179 Black-headed Gull <i>Chroicocephalus ridibundus</i> A192 Roseate Tern <i>Sterna dougallii</i> A193 Common Tern <i>Sterna hirundo</i> A194 Arctic Tern <i>Sterna paradisaea</i> A999 Wetlands</p>	<p>9km directly from RBSF site. No hydrological pathway</p>	<p>Potential for Direct Effects – No</p> <p>Potential for Indirect Effects – No</p>
<p>Malahide Estuary cSAC (000205)</p>	<p>Conservation Objectives Version 1.0 (27/05/2013)</p> <p>To maintain the favourable conservation condition of</p>	<p>9.5 km direct, 13.3km via hydrological pathways.</p>	<p>Potential for Direct Effects – No</p> <p>Potential for Indirect Effects – No</p>

	<p>(qualifying interests individually listed) in Malahide Estuary cSAC, which is defined by a list of attributes and targets.</p> <p>Qualifying Interests 1140 Mudflats and sandflats not covered by seawater at low tide 1310 Salicornia and other annuals colonising mud and sand 1320 Spartina swards <i>Spartinion maritimae</i> 1330 Atlantic salt meadows <i>Glauco-Puccinellietalia maritimae</i> 1410 Mediterranean salt meadows <i>Juncetalia maritimi</i> 2120 Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) 2130 Fixed coastal dunes with herbaceous</p>		
<p>Malahide Estuary SPA (004025)</p>	<p>Conservation Objectives Version 1.0 (16/08/2013)</p> <p>To maintain the favourable conservation condition of (qualifying interests individually listed) in Malahide Estuary SPA, which is defined by a list of attributes and targets.</p> <p>Qualifying Interests A005 Great Crested Grebe <i>Podiceps cristatus</i> A046 Brent Goose <i>Branta bernicla hrota</i> A048 Shelduck <i>Tadorna tadorna</i> A054 Pintail <i>Anas acuta</i> A067 Goldeneye <i>Bucephala clangula</i> A069 Red-breasted Merganser <i>Mergus serrator</i> A130 Oystercatcher <i>Haematopus ostralegus</i> A140 Golden Plover <i>Pluvialis apricaria</i> A141 Grey Plover <i>Pluvialis</i></p>	<p>9.5 km direct, 13.3km via hydrological pathways.</p>	<p>Potential for Direct Effects – No</p> <p>Potential for Indirect Effects – No</p>

	<i>squatarola</i> A143 Knot <i>Calidris canutus</i> A149 Dunlin <i>Calidris alpina</i> <i>alpina</i> A156 Black-tailed Godwit <i>Limosa limosa</i> A157 Bar-tailed Godwit <i>Limosa lapponica</i> A162 Redshank <i>Tringa</i> <i>totanus</i> A999 Wetlands		
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13.2.13. **Likely Significant Effects**

13.2.14. The possibility of whether or not significant effects are likely to arise is assessed by the applicant using the established source-pathway-receptor model. The project is not necessary for the management of any European site. The likely significant effects (direct and indirect) which could arise as a result of the Ringsend WwTP component are listed under Table 1 of the applicants AA Screening /Statement / NIS. I am satisfied that using the Source-Pathway-Receptor model and having regard to the qualifying interests and conservation objectives that the information contained in this table is representative of the significant effects likely to arise. I have summarised these likely significant effects under.

13.2.15. **Likely significant effects (Direct and Indirect) which could potentially arise are:**

Direct Effects as a result of the Ringsend WwTP component

- Temporary disturbance to habitat and species as a result of laying of a new underground electrical connection to an existing underground ESB cable in an area c.30m x 10m, which is within the South Dublin Bay and River Tolka Estuary SPA (site code 004024).

Indirect /Secondary Effects as a result of the Ringsend WwTP component

- Discharge of treated effluent from the WwTP both during the construction and operational phases of the proposed Ringsend WwTP Component. As the proposed discharge point would remain at the same location in the Liffey Estuary, there is potential that these changes could affect habitats or species that occur in the tidal part of Dublin Bay.

- Deterioration of receiving water quality during construction and operation phases arising from accidental discharge or pollution and resulting in deterioration of receiving watercourses and associated habitats and species.
- Construction activities on site at the Ringsend WwTP component have the potential to cause visual disturbance to waterbird populations that use the replacement grassland area that forms part of the South Dublin Bay and River Tolka Estuary SPA, immediately south of the WwTP.
- The construction phase of the Ringsend WwTP component has potential to give rise to temporary disturbance from dust and changes in air quality during construction.
- Construction noise may affect Brent geese and breeding terns within the South Dublin Bay and River Tolka Estuary SPA.
- Potential spread of Invasive species could lead to loss/deterioration of habits on the South Dublin Bay and River Tolka Estuary SPA.
- (Given the change to odour has been assessed as not resulting in any residual impacts as a result of the proposed development, I do not consider that based on odour, impacts would arise on qualifying interests of cSACs / SPAs in view of their conservation objectives).

Direct Effects as a result of the RBSF component

- None

Indirect /Secondary Effects as a result of the RBSF component

- There is a potential pathway between the RBSF component and the Malahide Estuary cSAC (site code 000205) via the surface water network. Deterioration of receiving water quality during construction and operation phases arising from accidental discharge or pollution and resulting in deterioration of receiving watercourses and associated habitats and species could potentially occur.

13.2.16. I am satisfied that Howth Head cSAC can be screened out as there are no hydrological pathways from either the Ringsend WwTP or RBSF components to this European site. Both project components are also sufficiently separated to conclude

that there would not be any potential for significant effects in relation to airborne noise or visual disturbance impacts. Equally, I am satisfied that the project as a whole, including both components collectively, is not likely to give rise to significant effects on this site, having regard to its conservations objectives.

13.2.17. In relation to Malahide Estuary cSAC and also Malahide SPA, I note that while there is a potential pathway between the RBSF component and the Malahide Estuary cSAC, no discharge or emissions are proposed to leave the RBSF site, except for rainfall and clean surface water, once best practice is employed in construction and the CEMP is implemented. Both components are also sufficiently remote from these European sites such as to conclude that there would be no potential for significant effects in relation to airborne noise or visual disturbance. Equally, I am satisfied that the project as a whole is not likely to give rise to significant effects on this site, having regard to their conservations objectives.

13.2.18. In relation to Baldoyle Bay SAC and Baldoyle Bay SPA, these European sites are sufficiently remote from the proposed RBSF site to objectively conclude a finding of no significant effect in relation to noise. The water quality modelling output shows that there is no impact from the construction of works on Baldoyle Bay or from the operation of the project. These two European sites can thus objectively be screened out from further assessment.

13.2.19. I am satisfied that the conclusion that no such in-combination effects are likely to arise is correct. By applying the precautionary principle, the requirement to proceed to Stage 2 in relation to the remaining seven sites where the evaluation determined the likelihood of significant effects (including in-combination effects) could not be discounted without further examination is, I consider, reasonable.

13.2.20. **Stage 1 - Screening Conclusion**

13.2.21. It is reasonable to conclude that on the basis of the information on the file, which I consider adequate in order to issue a screening determination, that the proposed development including the proposed development, individually or in combination with other plans or projects would not be likely to have a significant effect on the European Sites:

- Howth Head cSAC (site code 000202)
- Malahide Estuary cSAC (site code 000205)
- Malahide Estuary SPA (site code 004025)
- Baldoyle cSAC (site code 004016)
- Baldoyle SPA (site code 000199)

in view of the sites' conservation objectives, a Stage 2 Appropriate Assessment is not therefore required in respect of these sites. Potential for significant indirect effects on the features of interest of the following European sites, having regard to their conservation objectives, cannot be ruled out in respect of the remaining seven European sites:

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

13.2.22. Accordingly, a Stage 2 Appropriate Assessment is required to determine the potential of the proposed development to adversely affect the integrity of the said European Sites.

13.3. **Appropriate Assessment – Stage 2**

13.3.1. **Introduction**

13.3.2. The sites brought forward to stage two, seven in total, are listed in the Stage 1 Screening conclusion above. The project description is set out in detail in Section 4 of my overall assessment and summarised above in consideration of Appropriate Assessment – Stage 1 Screening.

13.3.3. **European Sites**

13.3.4. Below I provide a brief description of each of the European sites with specific regard to their qualifying interests and their conservations objectives. I have examined the sites potential for significant effects on the integrity of the European sites arising from the proposed development. I have drawn on information provided by the applicant including information in their submitted Natura Impact Statement and throughout relevant sections of the EIAR, particularly those which deal with Biodiversity and Water. I have also extensively referred to the NPWS website. The qualifying interests for each of the seven sites are identified and are as set out in Tables 5 and 6 above.

South Dublin Bay and River Tolka Estuary SPA (Site Code 004024)

13.3.5. As noted in the NPWS site synopsis, the South Dublin Bay and River Tolka Estuary SPA is of ornithological importance as it supports an internationally important population of light-bellied Brent Goose and nationally important populations of a further nine wintering species. Furthermore, the site supports a nationally important colony of breeding Common Tern and is an internationally important passage/staging site for three tern species. Four of the species that regularly occur at this site are listed on Annex I of the E.U. Birds Directive, i.e. Bar-tailed Godwit, Common Tern, Arctic Tern and Roseate Tern.

13.3.6. **Conservation Objectives** for South Dublin Bay and River Tolka Estuary SPA (March 2015) are to ensure that waterbird populations and their wetland habitats are maintained at, or restored to, favourable conservation condition. Grey Plover is proposed for removal from the list of Special Conservation Interests for the SPA. As a result, a site-specific conservation objective has not been set for this species.

South Dublin Bay cSAC (Site Code 000210)

13.3.7. The NPWS lists the South Dublin Bay cSAC as a fine example of extensive intertidal flats, of predominantly sand with muddy sands in more sheltered areas. It provides a supporting role to important populations of wintering bird populations of Dublin Bay.

13.3.8. **Conservation Objectives** for the South Dublin Bay cSAC (NPWS, 2013) are to maintain the favourable conservation condition of mudflats and sandflats not covered by seawater at low tide in South Dublin Bay SAC which is defined by a list of

attributes and targets.

North Bull Island SPA (Site Code 004006)

- 13.3.9. The North Bull Island SPA is considered an excellent example of an estuarine complex and is one of the top sites in Ireland for wintering waterfowl. It is stated to be of international importance because of both the total number of waterfowl and the individual populations of Light-bellied Brent Goose, Black-tailed Godwit and Bar-tailed Godwit that use it. There is a regular presence of several species that are listed on Annex I of the E.U. Birds Directive, notably Golden Plover and Bar-tailed Godwit.
- 13.3.10. **Conservation Objectives** for the North Bull Island SPA (NPWS 2014) are to ensure that waterbird populations and their wetland habitats are maintained at, or restored to favourable conservation condition.

North Dublin cSAC (Site Code 000206)

- 13.3.11. The NPWS lists the North Dublin cSAC (Site Code 000206) as a fine example of extensive intertidal flats. This site covers all of the inner part of north Dublin Bay, with the seaward boundary extending from the Bull Wall lighthouse across to Drumleck Point at Howth Head. This European site is of international importance because of both the total number of waterfowl and the individual populations of light-bellied Brent Goose, black-tailed godwit and bar-tailed godwit that use it. Also of note is the regular presence of several species that are listed on Annex I of the EU Birds Directive.
- 13.3.12. **Conservation Objectives** for the North Dublin cSAC (NPWS, 2013) are to maintain the favourable conservation condition of qualifying interests, which are defined by a list of attributes and targets.

Howth Head Coast SPA (Site Code 004113)

- 13.3.13. The NPWS lists the Howth Head Coast SPA as being of high ornithological importance as it supports a nationally-important population of Kittiwake. It is also a traditional nesting site for Peregrine Falcon, a species that is listed in Annex I of the E.U. Birds Directive. The site is easily accessible and has important amenity and

educational value due to its proximity to Dublin City.

- 13.3.14. **Conservation Objective** for Howth Head Coast SPA (Feb 2018) are to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

Dalkey Island SPA (Site Code 004172)

- 13.3.15. The NPWS lists this SPA of particular importance as a post-breeding/pre-migration autumn roost area for Roseate Tern, Common Tern and Arctic Tern. The NPWS also notes that the recent nesting by Roseate Tern is highly significant. All three of the tern species using the site are listed on Annex I of the E.U. Birds Directive.

- 13.3.16. **Conservation Objective** for Dalkey Island SPA are to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

Rockabill to Dalkey Island cSAC (Site Code 003000)

- 13.3.17. This Rockabill to Dalkey Island cSAC site is of conservation importance for reefs, listed on Annex I, and Harbour Porpoise, listed on Annex II of the E.U. Habitats Directive. A number of marine species have also been identified in the cSAC. The NPWS site synopsis notes that a large number of terns (Arctic, Common and Roseate) are known to use Dalkey Island as a staging area (c. 2,000) after breeding. Other seabirds commonly seen include Kittiwake, Razorbill, Guillemot, Puffin, Fulmar, Shag, Cormorant, Manx Shearwater, Gannet and gulls.

- 13.3.18. **Conservation Objective** for the Rockabill to Dalkey Island cSAC (May 2013) are to maintain or restore the favourable conservation condition of the habitats/ species for which the cSAC has been selected.

13.4. **Significant Effects on European Sites**

- 13.4.1. The direct and indirect impacts from the proposed project components that have the potential (in the absence of mitigation) to result in a likelihood of significant adverse effects on qualifying interests having regard to the conservation objectives of the European sites brought forward to Stage 2 Appropriate Assessment are listed and

assessed below.

13.4.2. Direct Effects as a result of the Ringsend WwTP component

Impact	Temporary disturbance to habitat and species as a result of laying of a new underground electrical connection to an existing underground ESB cable in an area c.30m x 10m, which is within the South Dublin Bay and River Tolka Estuary SPA (site code 004024).
Assessment of Likely Significant Effects	<p>The grassland area is used by bird species including light-bellied Brent Goose, Oystercatcher, black-tailed Godwit, Redshank and Curlew, all of which are qualifying interests of the SPAs in Dublin Bay.</p> <p>Works are proposed to take place in summer months (May to August) outside of the nesting season and when the Brent Geese are absent from the SPA. The construction area would be fully reinstated by backfilling with the original soil and laying of grass turves in their original position. The grassland is proposed to be fully reinstated in time for the return of the geese in September/October.</p> <p>No remaining significant effects are anticipated.</p> <p>Monitoring of waterbirds on the grassland south of the project is proposed each winter between October and April during construction and for a year after to allow the efficacy of the mitigation measures to be verified.</p>
Assessment Conclusion	In conclusion, the proposed development would not adversely affect the integrity of the designated site and no reasonable scientific doubt remains as to the absence of such effects.

13.4.3. Indirect /Secondary Effects as a result of the Ringsend WwTP component

Impact	Discharge of treated effluent from the WwTP both during the construction and operational phases of the proposed Ringsend WwTP Component. As the proposed discharge point would remain at the same location in the Liffey Estuary, there is potential that these changes could affect habitats or species that occur in the tidal part of Dublin Bay.
Assessment of Likely Significant Effects	<p>During construction, there would be some reduction in treatment capacity during a nine-month period between the construction of AGS and SBR retrofit. In addition, there would be an increase in stormwater overflows. Temporary impacts on marine ecology could arise but the duration of the project and the magnitude of impact would not be of a sufficient scale as to result in adverse significant effects on European sites, having regard to the sites' conservation objectives.</p> <p>During the operation phase, water quality in the inner part of Dublin Bay would be improved primarily as a result of reduction of P and N leading towards a more diverse community of species and positive effects are predicted on the significant effects on the favourable conservation status of the qualifying interests or on the conservation objectives of the European sites within Dublin Bay. Given the relatively high background nutrients in Dublin Bay, no significant effects on waterbirds including Brent Geese and Wigeon that forage on macroalgae, Harbour Porpoise (a qualifying interest of the Rockabill to Dalkey cSAC), Kittiwake (a qualifying interest for Howth Head SPA) and Artic Tern, Common Tern and Roseate Tern (a qualifying interest for Dalkey Island SPA) that forages on shoaling fish, are anticipated.</p> <p>Overall it is submitted that the resulting impacts would not give rise to any significant effects on the favourable conservation status of the qualifying interests or on the conservation objectives of the</p>

	<p>European sites within Dublin Bay. It is assessed that it would be unlikely that the food resource of waterbirds in the Tolka Estuary would be negatively affected given the increase in diversity of species that would occur. Such changes are expected to be slow and would result in long-term positive impacts.</p> <p>Apart from the adherence to the project CEMP and related Environmental Incident response procedures as standard best practice, no other specific mitigation measures are required.</p> <p>No significant adverse effects are anticipated.</p> <p>Outside of monitoring of waterbirds on the grassland for construction and a year after construction, no other specific monitoring of waterbirds is proposed. Instead, it is proposed to make use of a monitoring programme by Birdwatch Ireland for all of Dublin Bay which can be conditioned to extend to a three year period post construction.</p>
<p>Assessment Conclusion</p>	<p>In conclusion, the proposed development would not adversely affect the integrity of the designated sites and no reasonable scientific doubt remains as to the absence of such effects.</p>

<p>Impact</p>	<p>Deterioration of receiving water quality during construction and operation phases arising from accidental discharge or pollution and resulting in deterioration of receiving watercourses and associated habitats and species.</p>
<p>Assessment of Likely Significant Effects</p>	<p>Accidental release of contaminants / pollution in the form of oils, hydrocarbons, concrete/cement could potentially discharge into the Liffey Estuary and thereafter travel to Dublin Bay. If this were to occur at significant magnitude and duration, it could result in significant effects on intertidal and subtidal habitats in South Dublin Bay cSAC and North Dublin Bay cSAC and qualifying</p>

	<p>interests of SPAs within Dublin Bay.</p> <p>Apart from the adherence to the project CEMP and related Environmental Incident response procedures as standard best practice, no other specific mitigation measures are required.</p> <p>Remaining significant effects are unlikely.</p> <p>No specific monitoring is proposed or required.</p>
Assessment Conclusion	<p>In conclusion, the proposed development would not adversely affect the integrity of the designated sites and no reasonable scientific doubt remains as to the absence of such effects.</p>

Impact	<p>Construction activities on site at Ringsend WwTP Component have the potential to cause visual disturbance to waterbird populations that use the replacement grassland area that forms part of the South Dublin Bay and River Tolka Estuary SPA, immediately south of the WwTP.</p>
Assessment of Likely Significant Effects	<p>Any visual disturbance has potential to result in significant effects on the qualifying interests of the Tolka Estuary SPA (important population of Light-bellied Brent Goose and nationally-important populations of a further nine wintering species), having regard to the site's conservation objectives.</p> <p>Solid screening would be erected between the construction site and the grassland area prior to construction in order to reduce or eliminate any visual disturbance.</p> <p>No remaining significant effects are likely.</p> <p>Monitoring of waterbirds on the grassland south of the project is proposed each winter between October and April during construction and for a year after to allow the efficacy of the mitigation measures to be verified.</p>
Assessment	<p>In conclusion, the proposed development would not adversely affect the integrity of the designated site and no reasonable</p>

Conclusion	scientific doubt remains as to the absence of such effects.
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Impact	The construction phase of the Ringsend WwTP components has potential to give rise to temporary disturbance from dust and changes in air quality during construction.
Assessment of Likely Significant Effects	<p>The movement of excavated soils and other material has the potential to generate fugitive dust which could travel through wind exposure to adjacent European sites. As part of the CEMP, a dust management plan would be put in place such that dust emissions on site would remain at or below 350 mg/m²/day to ensure it does not impact on air quality.</p> <p>No significant effects are therefore anticipated as a result of dust. Dust monitoring would be undertaken in accordance with commitments outlined in the CEMP and the EIAR.</p> <p>Potential arises for NO_x emissions to impact on grasslands and intertidal habitats. The maximum increase in the NO₂ dry deposition rate is 0.22 kg(N)/ha/yr is well below the critical load for inland water habitats on the improved grassland or on the bird species that use the South Dublin Bay and River Tolka Estuary SPA. No significant effects are therefore likely to arise as a result of air quality.</p>
Assessment Conclusion	In conclusion, the proposed development would not adversely affect the integrity of the designated site and no reasonable scientific doubt remains as to the absence of such effects.

Impact	Construction noise may affect Brent geese and breeding terns within the South Dublin Bay and River Tolka Estuary SPA.
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<p>Assessment of Likely Significant Effects</p>	<p>Construction noise has the potential to cause disturbance to wintering waterbirds and nesting terns within South Dublin Bay and River Tolka Estuary SPA.</p> <p>The common tern (<i>Sterna hirundo</i>) colony at Poolbeg, which forms part of South Dublin Bay and River Tolka Estuary SPA is located c.380m from the nearest part of the proposed development. Construction noise has been assessed as typically ranging between 40 to 45 dB LA_{eq} at the tern colony area.</p> <p>It is submitted that the tern colony itself generates a noise level of up to 70 to 80 dB(A), well in excess of any construction noise, through calling of terns during the breeding season.</p> <p>While the noise made by terns themselves cannot in my view be considered as comparable to construction noise, I note that as stated in the EIAR, the tern colony and other waterbirds in the area are habituated to noise from the plant itself and from the surrounding industrial operations and the city itself.</p> <p>A construction noise and vibration management plan and CEMP are proposed.</p> <p>Therefore, I accept the conclusion overall that noise from the proposed upgrade site would not be threatening to birds and construction noise would have imperceptible impacts on conservation objectives for any of the European sites brought forward to Stage two of the AA.</p> <p>Monitoring of waterbirds on the grassland south of the project is proposed each winter between October and April during construction and for a year after to allow the efficacy of the mitigation measures to be verified. Birdwatch Ireland monitoring programme would also be used.</p>
<p>Assessment</p>	<p>In conclusion, the proposed development would not adversely</p>

Conclusion	affect the integrity of the designated site and no reasonable scientific doubt remains as to the absence of such effects.
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Impact	Potential spread of Invasive species could lead to loss/deterioration of habits on the South Dublin Bay and River Tolka Estuary SPA.
Assessment of Likely Significant Effects	<p>Japanese Knotweed (<i>Fallopia japonica</i>) is known to exist at four locations along the east boundary. Where it would be disturbed during construction, it has the potential to spread to surrounding sites and/or the receiving water. If left uncontrolled, this could be considered a permanent, significant impact on European sites due to habitat loss. The invasive species management plan, which is prepared to outline stage would be required to be further developed and adhered to and I am satisfied that subject to implementation and adherence to the plan, no significant effects are likely.</p> <p>Annual monitoring of invasive species is proposed and if the results indicate any failures or shortcomings, in consultation with NPWS and other statutory undertakers, the applicant would commit to develop and implement additional control measures.</p>
Assessment Conclusion	In conclusion, the proposed development would not adversely affect the integrity of the designated site and no reasonable scientific doubt remains as to the absence of such effects.

13.4.4. **Direct Effects as a result of the RBSF component**

- None

13.4.5. **Indirect /Secondary Effects as a result of the RBSF component**

13.4.6. The assessment as presented in the NIS has determined that there would be no

potential for adverse effects on habitats or species.

13.4.7. Within the 10km zone of influence of the RBSF, the only European site brought forward to Stage two is the South Dublin Bay and River Tolka Estuary SPA. This site is remote from the proposed RBSF and given that no hydrological or hydrogeological pathways are present, the possibility of significant numbers of birds from this SPA being impacted by the RBSF is unlikely. Consequently, it can be concluded that the proposed development would not adversely affect the integrity of this SPA having regard to the conservation objectives of the site.

13.4.8. Nonetheless, the site is required to be assessed as part of the applicant's overall assessment for in-combination effects and I have dealt with such effects directly below.

13.4.9. **In-combination Effects**

13.4.10. The NIS considers the potential in-combination/cumulative impacts which could possibly arise when other plans and projects are taken into account. The assessment carried out included the wider overall project, referred to as the 'proposed upgrade project'. The assessment and the EIAR (Water and Biodiversity section) concludes that the proposed WwTP would not give rise to impacts on waterbird population and long-term changes to the waterbird population might be difficult to discern in the context of wider cumulative changes arising beyond those caused by the proposed development.

13.4.11. Beyond impacts assessed in relation to water and terrestrial biodiversity, I am satisfied that the construction and operation of the proposed development (taking into account proposed mitigation) is unlikely to result in any other in-combination impacts that would lead to significant effects.

13.4.12. **Monitoring**

13.4.13. Monthly surveys of waterbirds (between October and April) would be undertaken by the applicant on the grassland area to the south for the duration of the project and for one year after. In addition, it is stated that monitoring carried out by BirdWatch Ireland would be utilised. Given that the construction period would extend for a

period of approximately 10 years and that the plant would operate as a live plant during this time, I am satisfied with this proposed monitoring period.

13.4.14. Monitoring of invasive species is proposed to be carried out on an annual basis.

13.4.15. Together the monitoring outcomes would allow an assessment of the efficacy of mitigation measures proposed and where any shortcomings are discovered, the applicant proposed to develop and implement additional control measures.

13.5. **Conclusion on Appropriate Assessment**

13.5.1. On the basis of the information provided with the application, including the Natura Impact Statement, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, I am satisfied that the proposed development, individually or in combination with other plans or projects, would not adversely affect the integrity of the following European sites:

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

or any other European site, in view of the sites' conservation objectives.

14.0 Recommendation

- 14.1. On the basis of the above assessment, I recommend that the Board grant permission for the proposed development for the reasons and considerations and subject to the conditions set out below.

15.0 Reasons and Considerations

- 15.1. In coming to its decision, the Board had regard to a range of matters including the following:

European legislation, including of particular relevance:

- EIA Directive 2011/92/EU amended by Directive 2014/52/EU (EIA Directive);
- European Union Water Framework Directive 2000/60/EC;
- The European Union Urban Waste Water Treatment Directive 91/271/EEC;
- The European Union Bathing Water Directive 2006/7/EC;
- Groundwater Directive (2006/118/EC);
- Sewage Sludge Directive (86/278/EEC);
- Nitrates Directive (91/676/EEC);

National legislation including of particular relevance:

- The European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended;
- European Communities (Water Policy) Regulations, 2003, as amended;
- European Communities Environmental Objectives (Groundwater) Regulations 2010, as amended;
- Urban Waste Water Treatment Regulations 2001, as amended;
- The Waste Water Discharge (Authorisation) Regulations 2007, as amended;

- Bathing Water Quality Regulations 2008, as amended;

National and regional planning and related policy including:

- 'National Planning Framework – Ireland 2040' including Strategic Outcome 9 and corresponding Investment Action contained in the National Development Plan, 2018-2027;
- Water Services Strategic Plan where the upgrading of Ringsend Treatment Plant is recognised as a significant contribution in meeting its obligation under the Urban Wastewater Treatment Directive;
- National Wastewater Sludge Management Plan (2016 – 2041);
- River Basin Management Plan for Ireland 2018 – 2021;
- Greater Dublin Strategic Drainage Study (2005) and Greater Dublin Drainage Strategy: Overview & Future Strategy (2018);
- Regional Planning Guidelines for the Greater Dublin Area 2010-2022;
- Draft Regional Spatial and Economic Strategy (RSES);
- Eastern-Midlands Region Waste Management Plan 2015 – 2021;

Local planning context – Ringsend WwTP component

- The provisions of the Dublin City Development Plan 2016-2022, including Policies SI1 and SI2 which support development of water and wastewater systems by Irish Water in which the upgrading of the Ringsend Wastewater Treatment Plant is specifically referenced; related Planning Objectives SIO1 and SIO2 together with stated policies and objectives in support of the proposed development in the context of proper planning and sustainable development. Regard was also had to the land use zoning objectives for the area.

Local planning context – RBSF component

- The provisions of the Fingal Development Plan 2017-2023 including stated policies and objectives, particularly Objective WM15 which requires to work with Irish Water and other relevant stakeholders to ensure the provision of facilities for the safe and sustainable management of sludges (sewage, waterworks, agricultural, industrial and septic tank) and Local Objective 78, in support the proposed development in the context of proper planning and sustainable development. Regard was also had to the land use zoning objectives for the area.

and to the following matters

- the current performance of the existing wastewater treatment plant and the demonstrated need to improve discharge standards in order to increase capacity and meet water quality standards for bathing waters, coastal waters, transitional waters and designated sensitive waters in Dublin Bay in accordance with the requirements set out under the legislation and emissions limit values contained in the licence granted by the EPA under licence number D00-34-01;
- the entirety of the documentation that accompanied the planning application and reports and submissions, which were submitted by all parties, planning authorities, prescribed bodies and observers and the further submission made by the applicant during the course of the application;
- the established site context on the Poolbeg peninsula, spatially separated from residential development and the pattern of development in the area;
- the planning history of the site;
- the nature, scale and design of the proposed development including in particular the proven AGS technology and the associated nitrogen and phosphorous removal in relation to the Ringsend WwTP component and the nature, scale, design and purpose of the RBSF component,

- the range of proposed mitigation measures set out in the submitted Environmental Impact Assessment Report and Natura Impact Statement (incorporating Appropriate Assessment Screening);
- the submissions made in relation to the application and the report and recommendation of the inspector;

15.2. **Proper Planning and Sustainable Development**

15.2.1. The benefits of the proposed development are considered to be overwhelmingly positive. It's delivery would assist Ireland in meeting obligations set down under EU Directives, national legislation and planning policy expressed through the hierarchy plans which regulate development at a national, regional and local level. The development would enable sustainable residential and economic growth through the delivery of increased wastewater treatment capacity while protecting the environment through improving the quality of effluent discharged to the receiving water environment. It has been demonstrated in the application that the improvement envisaged in final effluent quality can be achieved at the existing Ringsend Wastewater treatment plant by the incorporation of scientifically proven aerobic granular sludge technology into the treatment process together with associated nitrogen and phosphorous removal. When compared to the previously permitted and proposed long sea outfall (in tunnel) option, the current proposal has significant advantages and would be less intrusive on the receiving environment. The regional biosolids storage facility would assist in meeting the aims of the Sewage Sludge Directive, regulating the use of sewage sludge in agriculture to prevent harmful effects. Outside of matters considered above, environmental impact assessment and appropriate assessment are considered in the following sections of my assessment set out below. Subject to consideration of these matters, it can be concluded that the proposed development is in accordance with the proper planning and sustainable development of the area.

15.3. **Environmental Impact Assessment**

The Board completed an environmental impact assessment of the proposed development and wider proposed upgrade project, taking into account:

- (a) The nature, scale, location and extent of the proposed development across the Ringsend WwTP and RBSF components;
- (b) The environmental impact assessment report and associated documentation submitted with the application;
- (c) The reports and submissions received from the planning authority, observers and prescribed bodies and the applicant's further submission in the course of the application;
- (d) The planning inspector's report;

The Board agreed with the summary and examination set out in the inspector's report, of the information contained in the environmental impact assessment report and associated documentation submitted by the applicant and submissions made in the course of the application. The Board is satisfied that the inspector's report sets out how these were addressed in the examination and recommendation and are incorporated into the Board's decision.

The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, provided information which is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the project on the environment, taking into account current knowledge and methods of assessment. The Board is satisfied that the information contained in the EIAR is up to date and complies with the provisions of EU Directive 2014/52/EU amending Directive 2011/92/EU. The Board considered that the main significant direct and indirect effects of the proposed development on the environment are those arising from the impacts listed below. A Construction Environmental Management Plan (CEMP) is the overarching general mitigation embedded in the project design and delivery for the construction stage. In addition, plans relating to Waste Management, Invasive Species Management, Traffic Management, Monitoring Plans and Emergency Response Plans are also proposed. The remaining impacts, both positive and negative are:

- Benefits/positive impacts to **population and human health** arising as a result of the overall project upgrade due to providing increased treatment

infrastructural capacity and improved level of treatment which would improve compliance with EU Directives and corresponding legislation and would be pivotal in supporting planned residential and economic growth in Dublin city and the region.

- Negative temporary impact on **population and human health** (recreational swimmers/water based sporting activities) because of a deterioration in water quality during a nine-month period of decommissioning of aspects of the WwTP (during construction) and a corresponding temporary loss of recreational amenity which would be partially mitigated by carrying out the works in winter period when the recreational water based activities are at seasonally low levels;
- Benefits/positive impacts on the environment (**soils, traffic, water quality, climate**) as a result of reduction in excavation and truck movements (estimated to be 70,000 HGV movements over an 18-month period) which would otherwise have been required to remove and transport rock and spoil during the construction phase of the undersea tunnel. During the operation phase, the proposal to omit the tunnel and associated diffuser point 9 km out to sea would also mean that there would be no deterioration of water quality at this location.
- Impacts arising on **land and soils** as a result of spread of invasive species (Japanese Knotweed) present on the Ringsend wastewater treatment site and which would be mitigated by the preparation and implementation of an Invasive Species Management Plan and method statement for the control of disturbance of soils containing Japanese Knotweed and the requirement that a suitably qualified ecologist would be engaged to oversee the implementation of the Invasive Species Management Plan and monitor the success of the mitigation measures post-construction;
- Risk of pollution of **receiving water environment** as a result of accidental spillages of chemicals, hydrocarbons or other contaminants entering the drainage system and discharging to the stream thereafter during the construction and operational phases. The impacts would be mitigated by

measures within a Construction and Environmental Monitoring Plan (CEMP) and adherence to best practice construction measures and incorporation of appropriate drainage facilities. Measures set out in the CIRIA guidance document on 'control and management of water pollution from construction sites' would be implemented. The guidelines provided by the Inland Fisheries Ireland (2016) on the protection of fisheries habitats during construction projects would also be adhered to.

- **Noise** impacts for the construction and operation phases which would be mitigated by the requirements to prepare and adhere to the Noise and Vibration Management Plans (NWMP) and comply with appropriate noise and vibration limits which are set out in the EIAR in respect of the development at Ringsend wastewater treatment plant and the development of the regional biosolids facility.
- **Odour impacts** for the operational phase which would be mitigated by the following:
 - Ringsend WwTP: odour from the wastewater treatment plant (excluding storm tanks) would be required not to exceed 10 ouE/m³ as the 99.4th percentile of hourly averages at the boundary of the Ringsend WwTP site. The adopted odour annoyance criterion of 3 ouE/m³ as the 98th percentile of hourly averages would not be exceeded at any sensitive receptor location. The Odour Management Plan would be updated as necessary and implemented to ensure the above standard is achieved during construction and operation.
 - RBSF: The adopted odour annoyance criterion of 3 ouE/m³ as the 98th percentile of hourly averages would not be exceeded at any sensitive receptor location.

The Board completed an environmental impact assessment in relation to the proposed development forming part of the overall proposed upgrade project and concluded that, subject to the implementation of the mitigation measures referred to above including proposed monitoring as appropriate, 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 adopted the report and conclusions set out in the inspector's report.

15.4. **Appropriate Assessment**

- 15.4.1. The Board agreed with and adopted the screening (Appropriate Assessment Stage one) and conclusions carried out in the inspector's report that South Dublin Bay and River Tolka Estuary SPA (site code 004024), South Dublin Bay cSAC (site code 000210), North Bull Island SPA (site code 004006), North Dublin Bay cSAC (site code 000206), Howth Head Coast SPA (site code 004113), Dalkey Islands SPA (site code 004172) and Rockabill to Dalkey Island cSAC (site code 003000) are the only European Sites in respect of which the proposed development has the potential to have a significant effect.
- 15.4.2. The Board considered the Natura Impact Statement and associated documentation submitted with the application, the mitigation measures contained therein, the submissions and observations on file, and the inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development as part of the overall proposed upgrade project for the aforementioned European Sites 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, the following:
- a. the likely direct and indirect impacts arising from the proposed development at Ringsend WwTP and the RBSF sites both individually, when taken together and in combination with other plans or projects,
 - b. the mitigation measures, which are included as part of the current proposal, and
 - c. 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 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.

16.0 Conditions

16.1. Ringsend WwTP and the RBSF components

1. The proposed development shall be carried out and completed in accordance with the plans and particulars lodged with the planning application and the information contained in the Environmental Impact Assessment Report and Natura Impact Statement, 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 commencement of development, or in default of agreement, shall be referred to An Bord Pleanála for determination, and the proposed development shall be carried out and completed in accordance with the agreed particulars.

Reason: In the interest of clarity and the proper planning and sustainable development of the area and to ensure the protection of the environment.

2. With the exception of the development hereby permitted, the proposed development at the Ringsend Wastewater Treatment Plant shall otherwise comply with the terms and conditions of permission granted under ABP Ref: 29N.YA0010, as amended by planning permission granted for alterations under ABP Ref. 29N.YM0002 and 29N.YM0004 and any further applications or alterations where permitted.

Reason: In the interest of clarity and the proper planning and sustainable

development of the area.

3. The period during which the development hereby permitted may be carried out shall be ten years from the date of this order.

Reason: 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.

4. Mitigation

- a) All mitigation and environmental commitments identified in the EIAR (Table 17-1 of Volume 3 and 4) shall be implemented in full as part of the proposed development except as may otherwise be required to comply with the following conditions.

Monitoring

- b) All monitoring measures identified in the EIAR (Table 17-2-of Volume 3 and 4) shall be carried out and the details of monitoring results shall be submitted to the Planning Authorities (Dublin City Council in respect of the Ringsend wastewater treatment plant and Fingal County Council in respect of the Regional Biosolids facility) except as may otherwise be required to comply with the following conditions.

Reason: In the interest of clarity and to protect the environment.

5. A contract specific Construction and Environmental Management Plan (CEMP) and Waste Management Plan (WMP) shall be submitted to and agreed in writing with both Planning Authorities in respect of the development at the Ringsend WwTP site and the RBSF site. The CEMPs and WMPs shall detail and ensure Best Construction Practice and compliance with statutory obligations.

As part of the CEMP, the submitted invasive species management plan

shall be updated as necessary for the control or disturbance to soils containing Japanese Knotweed in accordance with 'Irish Water Information and Guidance Document on Japanese Knotweed. The plan shall include a method statement for the removal of invasive species identified as being present on site.

The implementation of the invasive species management plan shall be overseen by a suitably qualified ecologist/botanist familiar with Japanese Knotweed.

Reason: To protect the environment during construction.

6. a) Prior to commencement of the 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 development at the Ringsend WwTP site and the RBSF site.
- b) The developer shall comply with the requirements of the Planning Authorities in respect of minimising traffic disruption on the local communities, cleaning and repair of any damage to the public road networks during the construction and operation phases.

Reason: To protect the public road network and in the interest of traffic safety.

7. The development shall adhere to the Noise and Vibration Management Plans (NWMP) and comply with appropriate noise and vibration limits set out in the EIAR in respect of the overall development at Ringsend wastewater treatment plant and the development of the regional biosolids facility.

During the construction and demolition phases, the proposal development shall comply with British Standard 5228 Noise Control on Construction and open sites Part 1. Code of practice for basic information

and procedures for noise control.

Construction Noise at the nearest sensitive receptor shall comply with the following limits:

- 70 L_{Aeq} (1 hour) dB – Daytime (07:00 – 19:00) and Saturdays (07:00 – 13:00)
- 65 L_{Aeq} (1 hour) dB – Evening (19:00 – 23:00)
- 55 L_{Aeq} (1 hour) dB – Night time (23:00 – 07:00)

Mitigation for the operation phase would include a number of items such as selection of 'low noise' equipment and plant, vibration isolation mounts and appropriate siting of fixed plant.

The developer(s) shall require the appointed contractor to employ and implement best practice construction noise and vibration management techniques throughout the construction phase in order to further reduce the noise and vibration impact to nearby noise sensitive receptors.

During the operation phase, noise shall be minimised by the selection of 'low noise' plant and equipment and incorporation of appropriate attenuation.

Noise monitoring during construction and commissioning and/or operation shall be carried out in accordance with the requirements of the Planning Authorities.

Reason: In the interest of the amenities of the surrounding area.

8. a) Ringsend WwTP

During operation, odour from the wastewater treatment plant (excluding storm tanks) shall not exceed 10 ou_E/m^3 as the 99.4th percentile of hourly averages at the boundary of the Ringsend WwTP site.

The adopted odour annoyance criterion of 3 ou_E/m^3 as the 98th percentile of hourly averages shall not be exceeded at any sensitive

receptor location. The Odour Management Plan shall be updated as necessary and implemented to ensure the above standard is achieved during construction and operation.

b) RBSF

The adopted odour annoyance criterion of 3 ouE/m³ as the 98th percentile of hourly averages shall not be exceeded at any sensitive receptor location.

Reason: In the interest of the amenities of the surrounding area.

9. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that that may exist within and proximate to the Ringsend wastewater treatment site.

In this regard the developer shall –

- a) Notify the Department of the Culture, Heritage and the Gaeltacht in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development.
- b) Employ a suitably qualified archaeologist who shall monitor all site investigations and other excavation works and,
- c) Provide arrangements for the recording and for the removal of any archaeological material which the Department of Culture, Heritage and the Gaeltacht considers appropriate to remove.

In default of an agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: 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.

10. a) Prior to the commencement of the development, the developer shall submit a detailed landscaping plan for each of the development components at Ringsend WwTP and the RBSF sites. Details, including strengthening of boundary treatment, screening of compounds and general landscape details including timescales shall be submitted to and agreed in writing with the planning authorities and the landscaping shall be carried out in accordance with the agreed details thereafter.
- b) Prior to the commencement of the development, a detailed decommissioning and site restoration plan in respect of the construction compounds, together with a timescale for its implementation, shall be submitted to and agreed in writing with the planning authorities.

Reason: In the interest of the amenities of the surrounding area.

11. a) The development shall comply with the requirements of the Planning Authorities with respect to surface water management.
- b) The existing surface water pipeline traversing the RBSF site shall be realigned and a wayleave provided in accordance with the requirements of the Planning Authority (Fingal County Council).

Reason: In the interest of providing best practice for surface water management and to provide for future maintenance of the realigned pipe at the RBSF site.

12. Prior to commencement of the development, the design details for the regional biosolids facility shall be submitted to and agreed in writing with the planning authority for the prevention of environmental pollution in the event of a fire occurrence. Such detail shall also include an assessment of the risk of environmental pollution due to fire water and any mitigation measures which may be necessary

Reason: In the interest of protection of the environment and amenities of

the area.

13. All works to be undertaken within and adjacent to designated European sites within Dublin Bay shall be undertaken in accordance with the requirements of a suitably qualified ecologist appointed following consultation with the National Parks and Wildlife Service.

Reason: In the interest of protection of designated European sites and qualifying interests, having regard to the sites conservation objectives.

14. The developer shall pay to the planning authority (Fingal County Council) a financial contribution as a special contribution under section 48(2) (c) of the Planning and Development Act 2000, as amended, in respect of the upgrade and signalisation of the R135 and the N2 North Bound Slip priority junction. The amount of the contribution 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 for determination. The contribution shall be paid prior to commencement of development or in such phased payments as the planning authority may facilitate. The application of indexation required by this condition 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.

Reason: It is considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning authority which are not covered in the Development Contribution Scheme and which would benefit the proposed development.

Patricia Calleary

Senior Planning Inspector

12th February 2019



**ATTACHMENT B.3.9:
PLANNING APPROVAL, JANUARY 2023**

Comhairle Contae Fhine Gall
Fingal County Council

**An Roinn um Pleanáil agus
Infrastruchtúr Straitéiseach**
Planning and Strategic
Infrastructure Department



RPS
West Pier Business Campus
Dun Laoghaire
Co Dublin
A96 N6T7

NOTIFICATION OF DECISION TO GRANT PERMISSION

PLANNING & DEVELOPMENT ACT 2000, AS AMENDED

Decision Order No. PF/0166/23	Decision Date 30 January, 2023
Register Ref. F22A/0659	Registered 25 November, 2022

Area: Howth Malahide

Applicant: Irish Water

Development:

The development will consist of the construction of 2 no. pumping stations (PSO1 and PSO2) and associated infrastructure. Pumping station (PSO1) is proposed at the turning circle on @Ceanchor Road and lands at the entrance driveway of the residential property known as Baron's Brae. PSO1 includes: an underground wet well, underground flowmeter and valve chambers, an underground inlet/overflow chamber with a mechanical screen, a control panel kiosk (2.3mH) and wet kiosk (1.2mH), undergrounding of the existing ESB overhead line and associated connection works to the control kiosk, upgrade of existing entrance, including realignment of existing walls and gate and removal of trees to facilitate parking for maintenance and emergency works and, a stand-by roadside power generator (1.85mH) adjacent to Ceanchor Road c. 240m to the west of PSO1 and associated works. Pumping station (PSO2) is proposed adjacent to the south edge of Carrickbrack Road (R105). PSO2 includes: an underground wet well, an underground emergency storage tank (80m³), an underground valve chamber and flowmeter chamber, an underground inlet/overflow chamber, an ancillary single storey building (4mH) including toilet, control room and storage room, c. 16sqm, an actuator valve kiosk (1.1mH) and wet kiosk (1.2mH), an ESB Substation (2.6mH), c. 9sqm and, 3 no. car parking spaces and, other associated site development works including site clearance, site entrance works, hardstanding, access, new boundary walls/fencing up to 2.4m in height, retaining wall, ground level alterations, landscaping and site drainage. The proposed development includes all necessary ancillary pipework and manholes, diversion of existing utilities, new power supply and water connection for the pump stations, ducting, mechanical and electrical services, instrumentation, automation, controls and equipment.

Location: Carrickbrack Road, Sutton South, and, Ceanchor Road, Censure, Howth, Dublin

Floor Area: 11.58 Sq Metres

Time extension(s) up to and including

Additional Information Requested / Received /

In pursuance of its functions under the above mentioned Act, as Planning Authority, the County Council for the County of Fingal did by Order dated as above make a decision to **GRANT PERMISSION** in respect of the above proposal.

Subject to the (9) conditions on the attached Pages.

Conditions and Reasons

1. The development shall be carried out in its entirety in accordance with the plans, particulars and specifications lodged with the application, save as may be required by the other conditions attached hereto.

REASON: To ensure that the development shall be in accordance with the permission, and that effective control be maintained.

2. The developer shall comply with the following requirements of the Planning Authority;

- (a) At PS02, submit details of the stock proof fence indicated to surround the services compound which shall comply with the requirements of the Howth SAAO.

Amendments shall be set out on revised plans, elevations and site layout plan at scale 1:200 to be submitted to the Planning Authority for the written agreement prior to the commencement of the development.

REASON: In the interest of the proper planning and sustainable development of the area.

3. The developer shall comply with the following requirements of the Planning Authority;

- (a) The drainage strategy for the proposed development includes the provision of a land drain diversion on the site of Proposed pump station PS02 along with a stormwater sewer diversion. Prior to construction, the developer shall submit for the written agreement of the Planning Authority more information on these diversions to provide more clarity to include information regarding what is the current condition of the land drain, does the land drain convey regular flows and what impact will the proposed diversion have, if any.

- (b) The soakaway shall comply with BRE Digest 365 and be at least 5m from any structure and 3m from any boundary. The applicant is asked to submit the infiltration tests to establish the ground suitability for the proposed soakaway.

- (c) No surface water / rainwater shall discharge into the foul water system under any circumstances.

- (d) The surface water drainage shall be in compliance with the Greater Dublin Regional Code of Practice for Drainage Works, Version 6.0, FCC, April 2006.

REASON: In the interest of the proper planning and sustainable development of the area.

4. The developer shall comply with the following requirements of the Planning Authority;

- (a) The developer shall sign a connection agreement with Irish Water prior to the commencement of the development and adhere to the standards and conditions set out in that agreement.

(b) All development shall be carried out in compliance with Irish Water Standards codes and practices.

(c) Any proposals by the developer to divert or build over existing water or wastewater services shall be submitted to Irish Water for written approval prior to works commencing.

(d) Separation distances between the existing Irish Water assets and proposed structures, other services, trees, etc. have to be in accordance with the Irish Water Codes of Practice and Standard details.

REASON: To ensure adequate provision of water and wastewater facilities.

5. The developer shall comply with the following requirements of the Planning Authority;

(a) The Landscape Plans shall be implemented within the first planting season following substantial completion of construction works with the following amendments at the PS02 Pumping Station (Bellingham lands):

i) All proposed weld mesh fencing and gates shall be finished black in colour.

ii) The proposed native shrub planting shall be hawthorn, blackthorn or similar field species hedgerow, avoid the use of ornamental species.

iii) The proposed asphalt surfacing shall be substituted to a cellular grass paving system.

iv) The proposed 2no. Sorbus trees shall be omitted.

REASON: In the interest of the proper planning and sustainable development of the area.

6. The appointed ecologist shall be engaged by the developer for the duration of site works to monitor impacts on the local ecology including watercourses, surface water discharges, noise and dust emissions and the management of identified invasive plant species.

REASON: In the interest of the proper planning and sustainable development of the area.

7. Prior to the commencement of the development, the developer shall submit for the written agreement of the Planning Authority a final Construction, Environmental Management Plan and Construction Traffic Management Plan for the proposed development.

REASON: In the interest of the proper planning and sustainable development of the area.

8. The developer shall comply in full with the following:

(a) All necessary measures shall be taken by the applicant/developer to prevent the spillage or deposit of any materials including clay rubble or other debris on adjoining roads during the course of development. In the event of any such spillage or deposit, immediate steps shall be taken to remove the material from the road surface at the applicant/developers own expense.

(b) The applicant/developer shall be responsible for the full cost of repair in

respect of any damage caused to the adjoining public road arising from the construction work and shall either make good any damage to the satisfaction of Fingal County Council or pay the Council the cost of making good any such damage upon issue of such a requirement by the Council.

REASON: To protect the amenities of the area.

9. The following requirements shall be complied with in full;
- (a) The hours of construction shall be restricted to 8.00a.m. to 7.00p.m., Monday to Friday, and 8.00a.m. to 2.00p.m. on Saturdays.
 - (b) No construction activities shall take place on site on Sundays or Bank Holidays.

REASON: In the interests of residential amenity.

NOTE 1:

The applicant is advised that under the provisions of Section 34(13) of the Planning and Development Act 2000 a person shall not be entitled solely by reason of a permission to carry out any development.

NOTE 2:

The applicant is advised that the onus is on them to comply in full with the Building Control Regulations.

NOTE 3

The issue of encroachment or oversailing is a civil matter the applicant is advised that in the event of encroachment or oversailing of adjoining property, the consent of the adjoining property owner is required.

Signed on behalf of the Fingal County Council



31 January, 2023

for Senior Executive Officer

NOTES:

A number of the conditions attached to the planning permission may need compliance submissions to be lodged and agreed prior to commencement of development. Failure to comply with a condition of the planning permission is an offence under Section 151 of the Planning and Development Act 2000. Copies of each compliance submission should be made in triplicate.

The applicant is required to remove Site Notice on receipt of Notification from Planning Authority of decision.

Please note all observations/submissions have been taken into consideration when making this decision.

Please also note that consent under the above Planning legislation does not imply consent under the Building Control Regulations. The onus is on all practitioners to ensure full compliance with the Building Control Regulations (In certain circumstances design changes may require planning permission).

It should be further noted that planning permission is required in respect of changes to a Protected Structure or the exterior of a building in an Architectural Conservation Area which materially affects the character of the building/ structure.



Information Note - Public Water and Waste Water Networks

Connections

On the 1st of January 2014 Irish Water became the statutory body with the responsibility for all water services, both water and waste water. The provision of a water services connection will be carried out by Irish Water in partnership with each Local Authority.

Any persons seeking a connection to any of Irish Water's networks should make an application in the first instance to their Local Authority who will act on behalf of Irish Water in processing the application.

A Connection Agreement between Irish Water and the applicant will be required, prior to any connection being agreed, and will set out the conditions and charges to be applied to the connection. Details, including availability of application forms, are to be found on each Local Authority website.

It should be noted that Planning Authorities can no longer levy water and wastewater development charges and that these will now be incurred as part of the connection charge, if applicable.

Under the provisions of Section 55(1)(a) of the Water Services Act 2007 (the Act) it is an offence for a person to cause or permit the connection of a premises to the public water supply network, either directly or indirectly, or to otherwise take a water supply without the agreement of Irish Water.

Similarly under the provisions of Section 61(1) (a) of the Act, it is an offence for a person to cause or permit the connection of a premises to the public waste water collection network, either directly or indirectly, without the agreement of Irish Water.

INFORMATION for the purposes of Building Control;-

- **IMPORTANT NOTE NOW THAT YOU HAVE RECEIVED PLANNING PERMISSION or ARE INTENDING TO CARRY OUT BUILDING WORKS.**

BEFORE ANY BUILDING WORKS TAKES PLACE ON YOUR SITE YOU WILL NEED TO CHECK THE FOLLOWING Pre-Development Planning Conditions, Commencement Notice, Construction Products Regulations (CPR) (Regulation (EU) No. 305/2011) .

- **IF SOME OR ANY OF THESE ARE OMITTED YOUR BUILDING MAY BE AN UNAUTHORISED BUILDING AND YOU MAY BE GUILTY OF AN OFFENCE AND/OR YOU MAY BE SUBJECT TO PENALTIES.**
- **YOU SHOULD ALSO BE AWARE THAT IF YOU OMIT TO SUBMIT A VALID COMMENCEMENT NOTICE TO YOUR LOCAL AUTHORITY YOU MAY BE UNABLE TO GET A COMPLETION CERTIFICATE AND THIS MAY HAVE SERIOUS LONG TERM CONSEQUENCES.**

(The information is for guidance purposes only and does not purport to be a legal interpretation or constitute legal or professional advice.)

1. Pre-Development Planning Conditions;

1. If there are any Pre-Development conditions on the schedule of conditions attached to your planning permission you should give your immediate attention to them prior to the commencement of your development.

Note: All conditions must be complied with in full as failure to do so will render your permission invalid and may result in the initiation of enforcement proceedings for compliance with same

2. Commencement Notice; www.localgov.ie

In accordance with the Building Control Regulations you are obliged to submit a Commencement Notice prior to commencement of the development and it must be received by the BCA not less than 14 days and not more than 28 days before you wish to commence. Commencement Notice forms may be downloaded from www.localgov.ie, @ BCMS. Please complete same and submit on-line to BCMS.

- (a) A completed copy of the commencement notice which must be signed by the owner of the works and must (refer to section 9 S.I. No 9 of 2014) be to be accompanied by the following;
 - a. General Arrangement Drawings
 - b. A schedule of design documents as are currently prepared or to be prepared
 - c. An online- assessment via the Building Control Management System of the proposed approach to compliance with the requirements of the Building Regulations 1997 to 2014;
 - d. The preliminary inspection plan
 - e. A Certificate of Compliance (Design)
 - f. Notices of Assignment in respect of the Builder who will carry out the works and of the Assigned Certifier who will inspect and certify the works, and
 - g. Certificates of Compliance signed by the Builder and the Assigned Certifier undertaking to carry-out their roles in accordance with the requirements of the Building Regulations.

With regard to the above, please note that:

1. The Designer and the Assigned Certifier must be a Chartered Engineer, or Registered Architect or Registered Surveyor
2. A Competent Builder must execute the work

3. Your drawings must show details of how your Building will comply with the Building Regulations - drawings submitted for planning permission purposes are not typically building control compliance drawings.
4. The commencement notice and accompanying documentation must be filed electronically via the online Building Control Management System. Where notices and documentation are submitted in written format, the building control authority will arrange for scanning and uploading of same for which an administrative charge will apply and statutory deadlines relating to such notices may be delayed by up to seven days.

(Note: Statutory approvals relating to fire safety and disabled access continue to apply where relevant and are not affected by the above changes).

For more information; <http://www.environ.ie/en/DevelopmentHousing/BuildingStandards/>

3. Construction Products Regulations (CPR) (Regulation (EU) No. 305/2011)

CE MARKING of construction products covered by harmonised European Standards is mandatory, when the construction product is placed on the market.

You need to ensure that you appoint competent professionals.

Whilst the CPR concerns itself with the conditions which apply when placing a construction product on the market, clients, specifiers, designers and builders etc. should be aware of the following when incorporating construction products into building works:

1. When drawing up specifications, refer to the harmonized technical specifications and specifically to the performance requirements of individual characteristics when necessary,
2. When choosing the products most suitable for their intended use in construction works, review the manufacturer's Declaration of Performance,
3. Check National Annexes or Standard Recommendations which give guidance on appropriate minimum performance levels for specific intended uses of the product in Ireland. NSAI host this information at www.nsa.ie, and

NOTE; All works should be carried out using "proper materials...which are fit for the use for which they are intended and for the conditions in which they are to be used" to ensure compliance with the Building Regulations. For further information on the Building Regulations see <http://www.environ.ie/en/DevelopmentHousing/BuildingStandards/>

Construction Products Regulation

The Department of Housing, Planning & Local Government has in relation to the Construction Industry and Brexit produced two documents to raise awareness among specifiers, designers and builders of the need to look for CE marking on construction products and the accompanying Declarations of Performance.

The following is a link to an Information Leaflet: Brexit - Construction Products Regulations:

<https://www.housing.gov.ie/corporate/brexit/brexit-construction-products-regulation>

The following is a link to Construction Industry – Be Prepared FAQ document :

https://www.housing.gov.ie/sites/default/files/publications/files/construction_industry_-_be_prepared_for_no_deal_brexit_-_frequently_asked_questions.pdf

(A) REFUND OF FEES SUBMITTED WITH A PLANNING APPLICATION

Provision is made for a partial refund of fees in the case of certain repeat applications submitted within a period of twelve months where the full standard fee was paid in respect of the first application and where both applications relate to developments of the same character or description and to the same site. An application for a refund must be made in writing to the Planning Authority and received by them within a period of eight weeks beginning on the date of Planning Authority's decision on the second application. For full details of fees, refunds and exemptions the Planning & Development Regulations, 2001 should be consulted.

(B) APPEALS

1. An appeal against the decision may be made to An Bord Pleanála by the applicant or ANY OTHER PERSON who made submissions or observations in writing to the Planning Authority in relation to this planning application within four weeks beginning on the date of this decision. (N.B. Not the date on which the decision is sent or received). A person who has an interest in land adjoining land in respect of which permission has been granted may within the appropriate period and on payment of the appropriate fee apply to the Board for Leave to Appeal against that decision.
1. Every appeal must be made in writing and must state the subject matter and full grounds of appeal. It must be fully complete from the start. Appeals should be sent to:
The Secretary, An Bord Pleanála, 64 Malborough Street, Dublin 1.
2. An appeal lodged by an applicant or his agent or by a third party with An Bord Pleanála will be invalid unless accompanied by the prescribed fee. A schedule of fees is at 7 below. In the case of third party appeals, a copy of the acknowledgement of valid submission issued by F.C.C. must be enclosed with the appeal.
3. A party to an appeal making a request to An Bord Pleanála for an oral Hearing of an appeal must, in addition to the prescribed fee, pay to An Bord Pleanála a further fee (see 7 (f) below).
4. Where an appeal has already been made, another person can become an "observer" and make submissions or observations on the appeal. A copy of the appeal can be seen at the Planning Authority's office.
5. If the Council makes a decision to *grant permission/ retention/ outline/ permission consequent on the grant of outline* and there is no appeal to An Bord Pleanála against this decision, a final grant will be made by the Council as soon as may be after the expiration of the period for the taking of such an appeal. If every appeal made in accordance with the Acts has been withdrawn, the Council will issue the final grant as soon as may be after the withdrawal.
6. Fees payable to An Bord Pleanála from 5th September 2011 are as follows:

Case Type

Planning Acts

(a) Appeals against decisions of Planning Authorities

Appeal

- | | |
|---|--|
| (i) 1 st party appeal relating to commercial development where the application included the retention of development | €4,500 or €9,000 if an EIS or NIS involved |
| (ii) 1 st party appeal relating to commercial development (no retention element in application) | €1,500 or €3,000 in EIS or NIS involved |
| (iii) 1 st party appeal non-commercial development where the application included the retention of development. | €660 |

(iv) 1 st party appeal solely against contribution condition(s) – 2000 Act Section 48 or 49	€220
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(v) Appeal following grant of leave to appeal (An application for leave to appeal is also €110)	€110
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(vi) An appeal other than referred to in (i) to (v) above.	€220
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(b) Referral	€220
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(c) Reduced fee for appeal or referral (applies to certain specified bodies)	€110
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(d) Application for leave to appeal (section 37(6)(a) of 2000 Act)	€110
--	------

(e) Making submission or observation (specified bodies exempt).	€50
---	-----

(f) Request for oral hearing under Section 134 of 2000 Act	€50
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NOTE: the above fee levels for planning appeals and referrals remain unchanged from those already in force since 2007 (but note the addition of NIS in (i) and (ii) above).

Fees apply to: All third party appeals at 7(a)(iv) above except where the appeal follows a grant of leave to appeal; First party (section 37 appeals) planning appeals not involving commercial or retention development, an EIS or NIS. All other (non section 37) first party appeals.

These bodies at 7(c) above are specified in the Board's order which determined fees. They include planning authorities and certain other public bodies e.g. National Roads Authority, Irish Aviation Authority.

NB. This guide does not purport to be a legal interpretation of the fees payable to the Board. A copy of the Board's order determining fee under the Planning Act is obtainable from the Board. Further information about fees under other legislation may be found in the appropriate legislation and is also available from the Board.

If in doubt regarding any of the above appeal matters, you should contact An Bord Pleanála for clarification at (01) 8588 100.



ATTACHMENT B.3.10:

**PLANNING OFFICER'S REPORT, JANUARY
2023**

COMHAIRLE CONTAE FHINE GALL

RECORD OF EXECUTIVE BUSINESS AND CHIEF EXECUTIVE'S ORDER

Reg. Ref.: F22A/0659

PF/0166/23

Register Reference: F22A/0659

Area: Howth Malahide

Date of Registration: 25 November, 2022

Correspondence: RPS West Pier Business Campus, Dun Laoghaire, Co
Dublin, A96 N6T7

Development: The development will consist of the construction of 2 no. pumping stations (PSO1 and PSO2) and associated infrastructure. Pumping station (PSO1) is proposed at the turning circle on @Ceanchor Road and lands at the entrance driveway of the residential property known as Baron's Brae. PSO1 includes: an underground wet well, underground flowmeter and valve chambers, an underground inlet/overflow chamber with a mechanical screen, a control panel kiosk (2.3mH) and wet kiosk (1.2mH), undergrounding of the existing ESB overhead line and associated connection works to the control kiosk, upgrade of existing entrance, including realignment of existing walls and gate and removal of trees to facilitate parking for maintenance and emergency works and, a stand-by roadside power generator (1.85mH) adjacent to Ceanchor Road c. 240m to the west of PSO1 and associated works. Pumping station (PSO2) is proposed adjacent to the south edge of Carrickbrack Road (R105). PSO2 includes: an underground wet well, an underground emergency storage tank (80m³), an underground valve chamber and flowmeter chamber, an underground inlet/overflow chamber, an ancillary single storey building (4mH) including toilet, control room and storage room, c. 16sqm, an actuator valve kiosk (1.1mH) and wet kiosk (1.2mH), an ESB Substation (2.6mH), c. 9sqm and, 3 no. car parking spaces and, other associated site development works including site clearance, site entrance works, hardstanding, access, new boundary walls/fencing up to 2.4m in height, retaining wall, ground level alterations, landscaping and site drainage. The proposed development includes all necessary

CONTRIBUTION
Standard Levy: NIL
EXEMPT
Open Space:
Other:
SECURITY:
Bond:
Cash:
Other:

ju

COMHAIRLE CONTAE FHINE GALL

RECORD OF EXECUTIVE BUSINESS AND CHIEF EXECUTIVE'S ORDER

Reg. Ref.: F22A/0659

ancillary pipework and manholes, diversion of existing utilities, new power supply and water connection for the pump stations, ducting, mechanical and electrical services, instrumentation, automation, controls and equipment.

Location: Carrickbrack Road, Sutton South, and, Ceanchor Road, Censure, Howth, Dublin

Applicant: Irish Water

Application Type: Permission

Zoning: 'HA' - The objective of which is to 'Protect and Enhance High Amenity Areas'

Planning Officers Report:

CH/AH

Report of the Planning Officer typed on 25th January 2023.

Date of site visit: 13th December 2022.

Nature of Development

The development will consist of the construction of 2 no. pumping stations (PSO1 and PSO2) and associated infrastructure. Pumping station (PSO1) is proposed at the turning circle on @Ceanchor Road and lands at the entrance driveway of the residential property known as Baron's Brae. PSO1 includes: an underground wet well, underground flowmeter and valve chambers, an underground inlet/overflow chamber with a mechanical screen, a control panel kiosk (2.3mH) and wet kiosk (1.2mH), undergrounding of the existing ESB overhead line and associated connection works to the control kiosk, upgrade of existing entrance, including realignment of existing walls and gate and removal of trees to facilitate parking for maintenance and emergency works and, a stand-by roadside power generator (1.85mH) adjacent to Ceanchor Road c. 240m to the west of PSO1 and associated works. Pumping station (PSO2) is proposed adjacent to the south edge of Carrickbrack Road (R105). PSO2 includes: an underground wet well, an underground emergency storage tank (80m³), an underground valve chamber and flowmeter chamber, an underground inlet/overflow chamber, an ancillary single storey building (4mH) including toilet, control room and storage room, c. 16sqm, an actuator valve kiosk (1.1mH) and wet kiosk (1.2mH), an ESB Substation (2.6mH), c. 9sqm and, 3 no. car parking spaces and, other associated site development works including site

RECORD OF EXECUTIVE BUSINESS AND CHIEF EXECUTIVE'S ORDER

Reg. Ref.: F22A/0659

clearance, site entrance works, hardstanding, access, new boundary walls/fencing up to 2.4m in height, retaining wall, ground level alterations, landscaping and site drainage. The proposed development includes all necessary ancillary pipework and manholes, diversion of existing utilities, new power supply and water connection for the pump stations, ducting, mechanical and electrical services, instrumentation, automation, controls and equipment at Carrickbrack Road, Sutton South and Ceanchor Road, Censure, Howth, Co. Dublin by Irish Water

Site Location

The application site is made up of 3 separate sites at Carrickbrack Road and Ceanchor Road, Howth. At Carrickbrack Road a pumping station is proposed. These lands are located at entrance to Bellingham's Farm, a private laneway serving private dwellings and a farm. This section of Carrickbrack Road is open to the south with the northern side elevated above the road and consists of dwellings.

The remaining two sites are located on Ceanchor Road, one being on the eastern side of the V junction where a generator kiosk is proposed and the other site being at the eastern end of Ceanchor Road, adjoining the access to the Cliff Path where a pumping station is proposed.

Proposed Development -

The applicant is seeking planning permission for;

- Construction of 2 no. pumping stations (PSO1 and PSO2) and associated infrastructure.
- Pumping station (PSO1) is proposed at the turning circle on Ceanchor Road and lands at the entrance driveway of the residential property known as Baron's Brae.
- PSO1 includes: an underground wet well, underground flowmeter and valve chambers, an underground inlet/overflow chamber with a mechanical screen, a control panel kiosk (2.3mH) and wet kiosk (1.2mH),
- The development proposes the undergrounding of the existing ESB overhead line and associated connection works to the control kiosk.
- It is proposed to upgrade the existing entrance which includes realignment of the existing walls and gate. These works would create a more formalised bellmouth entrance with an access width of 10m road and pillars on each side of the entrance with a principle width of c. 10m. The walls are indicated to be c.1.2m in height with the pillars being c. 1.4m. The internal walls of the bellmouth extend a depth of c. 14m. The photomontages indicate that the wall would be finished in Howth Stone. The wider internal access road enables the provision of a parking space for maintenance workers. Removable pollards are proposed at the entrance.
- Trees are proposed to be removed which will facilitate parking for maintenance and emergency works.

The development includes for the provision of a stand-by roadside power generator (1.85mH) adjacent to Ceanchor Road c. 240m to the west of PSO1 and associated works.

Landscaping is proposed to surround the structure within planters finished in Howth stone.

RECORD OF EXECUTIVE BUSINESS AND CHIEF EXECUTIVE'S ORDER

Reg. Ref.: F22A/0659

Pumping station (PS02) is proposed adjacent to the south edge of Carrickbrack Road (R105). PS02 and includes: an underground wet well, an underground emergency storage tank (80m³), an underground valve chamber and flowmeter chamber, an underground inlet/overflow chamber, an ancillary single storey building (4mH) including toilet, control room and storage room, c. 16sqm, an actuator valve kiosk (1.1mH) and wet kiosk (1.2mH), an ESB Substation (2.6mH); c. 9sqm and, 3 no. car parking spaces and, other associated site development works including site clearance, site entrance works, hardstanding, access, new boundary walls/fencing up to 2.4m in height, retaining wall, ground level alterations, landscaping and site drainage.

The ancillary building would be finished with a tiled roof and cream/white render finish to the walls. It is proposed to be located within the north-eastern section of the site area with the car parking area proposed to the south. The proposed sub-station would be located outside of the compound on the eastern side of the access laneway.

The proposed retaining wall would be set off Carrickbrack Road by c. 5.7m. The eastern, southern and western boundaries would be finished with fencing c. 2.4m in height.

The proposed development includes all necessary ancillary pipework and manholes, diversion of existing utilities, new power supply and water connection for the pump stations, ducting, mechanical and electrical services, instrumentation, automation, controls and equipment.

The applicant states that additional works which are deemed to be exempt development by the applicant will be undertaken. These works have been included as part of the applicants Appropriate Assessment Screening but do not form part of this planning application.

As the works are proposed on lands which are not within the control of the applicant, letters of consent have been provided.

Planning History:

Subject Site

There does not appear to be any relevant planning history.

Within the Vicinity

Adjacent to Pumping Station 1

Windward

F23A/0001 - Construction of a single-storey five-bedroom detached flat roofed dwelling with internal courtyard; upgrade of existing septic tank with new wastewater treatment system; alterations to the existing vehicular entrance on Ceanchor Road; landscaping; and all ancillary works necessary to facilitate the development. The dwelling previously on the subject site, 'Windward', was approved for demolition on foot of Reg. Ref. F17A/0210, this property was subsequently demolished. Under assessment.

Development Plan Policies and Objectives

Land-use zoning:

The subject site is located within the following land-use zoning objective's

RECORD OF EXECUTIVE BUSINESS AND CHIEF EXECUTIVE'S ORDER

Reg. Ref.: F22A/0659

Pumping Station 1 and the Generator Kiosk are located on land with a road classification

Pumping Station 2

'HA' High Amenity, the objective of which seeks to *Protect and enhance high amenity areas*.

Landscape Character - coastal, highly sensitive.

The sites are located within a Housing Density Boundary.

There are Specific Objectives to 'Preserve Views' along Carrickbrack and Ceanchor Road

The application sites are located within the Howth Special Amenity Area

Objective 2.3

To preserve areas and features of special interest.

Policy 2.3.1

It is the policy of the Council to preserve the areas and features of special interest shown in Map B and listed in Tables 3 and 4.

Objective 2.6

To preserve the wooded character of existing residential areas.

Policy 2.6.1

The Council will protect the wooded character of existing residential areas. It will ensure that new development does not disturb existing groups of mature trees (shown on Map B) and where appropriate will apply conditions to planning permissions to safeguard existing trees and to require new planting.

Objective 2.7

To conserve existing hedgerows because they are attractive elements of the landscape and valuable wildlife habitats.

Policy 2.7.1

In general the Council will not allow development which involves hedgerow destruction. In particular it is the policy to protect those hedgerows, shown on Map B which are important elements of the attractive rural character of nearby roads.

Schedule 3, Part 1, Development in residential areas (as defined by Map A)

Objectives 3.1, 3.2, 3.3

- To protect residential amenity
- To protect and enhance the attractive and distinctive landscape character of these areas
- To ensure that development does not reduce the landscape and environmental quality of adjacent natural, semi-natural and open areas.

Policy 3.1.1 – Development Control Policy

Policy 3.1.2 – Design Guidelines

COMHAIRLE CONTAE FHINE GALL

RECORD OF EXECUTIVE BUSINESS AND CHIEF EXECUTIVE'S ORDER

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Schedule 3, Part 2, Development in Other Areas (as defined by Map A)

Objective 3.4

To preserve the beauty and distinctive character of the natural, semi-natural and other open areas within the special amenity area.

Policy 3.4.1

A development control policy applies which restricts new development within an acceptable range of land uses...

Policy 3.4.2 (Design Guidelines)

...metal palisade fencing, chain-link fencing, concrete and wire fencing, wooden post and rail, paddock style fencing, and timber lath fencing are not acceptable as permanent boundaries if they are visible from a public road or footpath...

Schedule 3, Part 3, Lands Used for Agriculture or forestry

Objective 3.5,3.6

To preserve the character of the landscape and to conserve nature by promoting habitat diversity and environmentally friendly farming practices and where applicable, to sustain the economic viability of working farms without compromising either landscape quality or habitat diversity.

Supporting policies – 3.5.1, 3.5.2,3.5.3, 3.5.4 – relate to the construction of farm buildings, enabling development directly related to viability of working farms and forestry.

Map A

PS01

These sites are located within 'Residential Areas' with a density restriction of 1 dwelling per hectare (PS01) and 2 dwellings per hectare (generator).

The site adjoins designated linking footpaths and footpaths which are designated as public rights of way within the SAAO.

PS02

This site located within 'Other Areas' with the land being designated for use as forestry or agriculture.

There are linking footpaths to the north of the site.

Map B

PS01 and Generator

Both adjoin footpaths and roads from which views will be protected.

Designated groups of mature trees in gardens.

Adjoins a proposed natural heritage area.

PS02

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The site of PS02 is located predominantly within Lodge Field, but also within Kelly's Field to the west. These fields are designated a 'enclosed field pattern' (6) 'The field pattern, comprising arable fields, bounded by mature hedgerows and in part by a diverted stream, lies mainly on Bellingham's Farm. The field pattern and townland boundary are unchanged from the first edition of the 6 inch map (1837).

The fields and access laneway are lined with hedgerows which are designated as important features of the landscape.

The Generator is proximate to hedgerows which are designated as an important feature of the landscape.

Development Plan Policies and Objectives

Objective WT01

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

Objective WT02

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

Objective WT03

Facilitate the provision of appropriately sized and located waste water treatment plants and networks including a new Regional Wastewater Treatment Plant and the implementation of other recommendations of the Greater Dublin Strategic Drainage Study, in conjunction with relevant stakeholders and services providers, to facilitate development in the County and Region and to protect the water quality of Fingal's coastal and inland waters through the provision of adequate treatment of wastewater.

Objective WT12

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

Pre-Planning consultation

The applicants state that no pre-planning discussions took place regarding the proposed development. It is noted that pre-planning discussions took place with the Planning Authority.

Third Party Submissions

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Third party submissions received within the statutory time period allocated can be summarised as follows;

- Supportive of the development.
- Development is welcome and long overdue.
- Residents proximate to the development wish to be kept informed.
- Noise impact arising from the pumping station.
- Minimum visibility of PS02
- Design of the pumping station and curtilage on the Carrickbrack Road would be contrary to the Howth SAAO.
- If a toilet is required, the location of the pumping station on Ceanchor Road would be more suitable, given the zoning.
- Construction may impact upon stability of dwellings along Somali.
- Reference to the HA zoning and utility installations are not permitted.
- Recommendations that railings generally are less visible finished in black rather than green
- lighting to PS02 should be designed and used to minimise light pollution, both with respect to the ecology and the protected views, during day and night.
- Concerns regarding the disposal of surface water.
- Recommend the inclusion of solar panels and more planting.
- The Doldrum Bay Outfall pipeline from overflow to discharge point should be considered.
- Manner in which AA has been undertaken, excluding works which are exempted development.
- An NIS and EIA should be included.

Departmental Reports

Irish Water	No objection subject to condition
Water Services	No objection subject to condition
Transportation	No objection subject to condition
Parks	No objection subject to condition
Biodiversity	Verbal report
Archaeology	No report

Assessment -

The main issues for consideration are, compliance with the Zoning Objective, integration and impact on the visual and residential amenity of the area, Water Services, Transportation, Parks, EIAR and Appropriate Assessment.

Zoning Objective

The works seeking permission are an acceptable form of development within a road classification subject to assessment and compliance with the policies and objectives of the Fingal Development Plan 2017-2023.

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Within the HA Zoning Objective, the proposed development is not listed as being permitted in principle nor not permitted and as such 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.

It is considered that the proposed development would ameliorate for current undue impacts to the environment and would therefore contribute to the improvement of existing residential amenities. The development would be consistent with the zoning objective and vision.

Integration and impact on the visual and residential amenities of the area

The 3 application sites are located within a highly sensitive setting, being within the Howth Special Amenity Area.

In assessing this proposal, cognisance is given to the requirements for new development as it relates to the Howth SAAO but also in recognition of the overarching planning gain that would be achieved in the event of a grant of permission. It is therefore submitted that a balanced assessment of the protection of the character of the area is maintained in addition to the strategic importance of the proposal.

The applicant has included planning statement which demonstrates the site selection process.

The review of feasible pumping station locations was undertaken noting the following constraints;

- Location of the existing combined sewer and the requirement to divert as much flow as possible.
- The Howth SAAO
- The SAC
- FCC development objectives.

The sites were assessed against certain criteria including - environment, planning and technical and economic.

Out of the three sites, the most prominent site would be Carrickbrack Road. It is submitted that the proposed building is modest in scale and height. It is further considered that the level difference between the road and the site (c. 3.3m) would further aid the proposed development's subordination into the context. The proposed fencing and inset gate, by virtue of the colour and height accentuates the departure from the established rural context. Given the nature of the works it is acknowledged that security of the site is required. Policy 3.4.2 (Other Areas) sets out that *'Concrete post and wire fencing and other forms of wire fencing are acceptable where there is a need for stock proof fencing provided that the fence is inside a hedge or wall which is in accordance with the guidelines'*. The primary purpose of the fence is not for stock proofing however it is a wire fence. It is recommended that the fence be finished in black which would integrate less obtrusively than the proposed green. The review by the Parks and Green Infrastructure Division recommends the asphalt be substituted for a cellular grass paving system. It is also recommended that the proposed sorbus trees be omitted and replaced with green walls and roof to the building to enable

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the retention of the views. Having regard to the detail provided within the Photomontages and the proposed landscaping and notwithstanding the views of the Parks Dept., the Planning Officer considers that the proposed hedge along the Carrickbrack Road would, when mature be sufficient to screen the site with the omission of the trees. The provision of green walls to the roof and building may pronounce the location of the structure rather than subordinate it to the surrounding natural environment. It is recommended tree planting, colour of fencing & surfacing can be dealt with by way of condition in the event of a grant of permission.

The stock proof fence indicated to surround the services compound is indicated to be 1.3m in height. No further details of this have been included. It is recommended that further clarity on this could be dealt with by condition.

The proposed works would not impact upon the enclosed field pattern.

The location of PS01 beside Earls Cliffe Gardens and the associated protections within the Howth SAAO are noted. The Planning Officer considers that the modest area of works proposed, predominantly located to the front boundary of the site would not be detrimental to the character of surrounding development.

The proposed boundary treatments to Barons Brae would generally accord with the requirements of Policy 3.1.2 of the Howth SAAO. The revisions however would create an entrance of a grand scale which is contrary to the design guidelines. The Planning Officer recommends that the extensive internal wing walls be omitted. Furthermore, the width of the entrance would also be excessive and should be reduced so as not to exceed the existing width. The removable bollards should be omitted.

These amendments could be dealt with by condition.

Residential Impact

The 3rd party concerns raised in relation to the noise and nuisance impact are noted and acknowledged. Review of the development by the Water Services Planning Section submits that there is sufficient separation distance as required by Objective WT12 of the Fingal Development Plan which indicates that undue impact would not be anticipated.

The Planning Officer considers that the proposed development would contribute to the enhancement of the existing residential amenities of the dwellings which are currently connected to the Doldrum Bay outfall by a foul sewer network which exceeds the intended capacity.

Water Services

The proposed development has been reviewed by the Water Services Planning Section. The report received states no objection subject to condition.

Irish Water by report states no objection subject to condition.

Transportation

The proposed development has been reviewed by the Transportation Planning Section. The report received states no objection subject to condition.

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Parks

The proposed development has been reviewed by the Parks and Green Infrastructure Division. The report received states no objection subject to condition.

EIAR

The development seeking permission would not by virtue of size and scale represent a development for the purpose of Part 10 under Section 5 or fulfil criteria under Schedule 7 of the Planning and Development Regulations 2001 (as amended) requiring an EIAR.

Appropriate Assessment

The applicant is seeking planning permission for the construction of two pumping stations, generator and associated works on lands at Carrickbrack Road and Ceanchor Road.

A Screening Statement for Appropriate Assessment has been undertaken by RPS on behalf of the applicants in respect of the proposed development.

The proposed development will end the long-standing issue of continuous discharge of untreated sewage into Doldrum Bay and will result in an overall positive effect on the water environment and biodiversity in Dublin Bay.

3rd party concerns raised regarding the AA screening are noted. The applicants state that AA statement has included all works as part of the screening process.

The assessment concludes, on the basis of objective scientific information that the proposed development, either individually or in combination with other projects and plans is not likely to have a significant effect on any European site and that an Appropriate Assessment is not required. The Planning Authority would conclude with the findings of the report.

Conclusion

Subject to condition the proposed development would accord with the policies and objectives of the Fingal Development Plan 2017-2023 and would integrate appropriately within the surrounding context without undue impact to the visual or residential amenities of the area.

The proposed development would be consistent with the proper planning and sustainable development of the area.

A grant of permission is recommended.

RECOMMENDATION

I recommend that a decision to **GRANT PERMISSION** be made under the **PLANNING & DEVELOPMENT ACT 2000, AS AMENDED**, subject to the following ⁽¹³⁾ condition(s):-

Conditions and Reasons

10-12
9NK

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1. The development shall be carried out in its entirety in accordance with the plans, particulars and specifications lodged with the application, save as may be required by the other conditions attached hereto.

REASON: To ensure that the development shall be in accordance with the permission, and that effective control be maintained.

2. The developer shall comply with the following requirements of the Planning Authority;
 - (a) At PS02, submit details of the stock proof fence indicated to surround the services compound which shall comply with the requirements of the Howth SAAO.

Amendments shall be set out on revised plans, elevations and site layout plan at scale 1:200 to be submitted to the Planning Authority for the written agreement prior to the commencement of the development.

REASON: In the interest of the proper planning and sustainable development of the area.

3. The developer shall comply with the following requirements of the Planning Authority;
 - (a) The drainage strategy for the proposed development includes the provision of a land drain diversion on the site of Proposed pump station PS02 along with a stormwater sewer diversion. Prior to construction, the developer shall submit for the written agreement of the Planning Authority more information on these diversions to provide more clarity to include information regarding what is the current condition of the land drain, does the land drain convey regular flows and what impact will the proposed diversion have, if any.
 - (b) The soakaway shall comply with BRE Digest 365 and be at least 5m from any structure and 3m from any boundary. The applicant is asked to submit the infiltration tests to establish the ground suitability for the proposed soakaway.
 - (c) No surface water / rainwater shall discharge into the foul water system under any circumstances.
 - (d) The surface water drainage shall be in compliance with the Greater Dublin Regional Code of Practice for Drainage Works, Version 6.0, FCC, April 2006.

REASON: In the interest of the proper planning and sustainable development of the area.

4. The developer shall comply with the following requirements of the Planning Authority;
 - (a) The developer shall sign a connection agreement with Irish Water prior to the commencement of the development and adhere to the standards and conditions set out in that agreement.
 - (b) All development shall be carried out in compliance with Irish Water Standards codes and practices.

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(c) Any proposals by the developer to divert or build over existing water or wastewater services shall be submitted to Irish Water for written approval prior to works commencing.

(d) Separation distances between the existing Irish Water assets and proposed structures, other services, trees, etc. have to be in accordance with the Irish Water Codes of Practice and Standard details.

REASON: To ensure adequate provision of water and wastewater facilities.

5. The developer shall comply with the following requirements of the Planning Authority;

(a) The Landscape Plans shall be implemented within the first planting season following substantial completion of construction works with the following amendments at the PS02 Pumping Station (Bellingham lands):

i) All proposed weld mesh fencing and gates shall be finished black in colour.

ii) The proposed native shrub planting shall be hawthorn, blackthorn or similar field species hedgerow, avoid the use of ornamental species.

iii) The proposed asphalt surfacing shall be substituted to a cellular grass paving system.

iv) The proposed 2no. Sorbus trees shall be omitted.

REASON: In the interest of the proper planning and sustainable development of the area.

6. The appointed ecologist shall be engaged by the developer for the duration of site works to monitor impacts on the local ecology including watercourses, surface water discharges, noise and dust emissions and the management of identified invasive plant species.

REASON: In the interest of the proper planning and sustainable development of the area.

7. Prior to the commencement of the development, the developer shall submit for the written agreement of the Planning Authority a final Construction, Environmental Management Plan and Construction Traffic Management Plan for the proposed development.

REASON: In the interest of the proper planning and sustainable development of the area.

8. The developer shall comply in full with the following:

(a) All necessary measures shall be taken by the applicant/developer to prevent the spillage or deposit of any materials including clay rubble or other debris on adjoining roads during the course of development. In the event of any such spillage or deposit, immediate steps shall be taken to remove the material from the road surface at the applicant/developers own expense.

(b) The applicant/developer shall be responsible for the full cost of repair in respect of any damage caused to the adjoining public road arising from the construction work and shall either make good any damage to the satisfaction of Fingal County Council or pay the Council the cost of making good any such damage upon issue of such a requirement by the Council.

REASON: To protect the amenities of the area.

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9. The following requirements shall be complied with in full;
- (a) The hours of construction shall be restricted to 8.00a.m. to 7.00p.m., Monday to Friday, and 8.00a.m. to 2.00p.m. on Saturdays.
 - (b) No construction activities shall take place on site on Sundays or Bank Holidays.
- REASON: In the interests of residential amenity.

10. That no development under any permission granted pursuant to this decision be commenced until security for the provision and satisfactory completion of services, including maintenance, to the taking in charge standard of the Local Authority for roads, open spaces, car parks and drains has been given by:- *omit ju*

A. Lodgement with the Council of a Bond of any Body approved by the Planning Authority in the sum of € which shall be kept in force by him until such time as the Roads, Open Spaces, Car Parks and Drains are taken in charge by the Council.....OR/

B. Lodgement with the Council of a Cash Sum of € to be applied by the Council at its absolute discretion if such services are not duly provided to its satisfaction on the provisions and completion of such services to standard specification.

REASON: To ensure that a ready sanction may be available to the Council to induce the provision of services and prevent disamenity in the development.

11. Prior to Commencement of development a financial contribution in the sum of € be paid *omit ju* by the applicant to Fingal County Council in lieu of open space provision towards the cost of amenity works in the area of the proposed development in accordance with the requirements of the Fingal Development Plan based on a shortfall of sqm of open space.

REASON: The provision of such services in the area by the Council will facilitate the proposed development. It is considered reasonable that the developer should contribute towards the cost of providing the services.

12. Prior to Commencement of development the developer shall pay the sum of € (updated *omit ju* at date of commencement of development, in accordance with changes in the Tender Price Index) to the Planning Authority as a contribution towards expenditure that was and/or that is proposed to be incurred by the planning authority in respect of public infrastructure and facilities benefiting development in the area of the Authority, as provided for in the Contribution Scheme for Fingal County made by the Council. The phasing of payments shall be agreed in writing with the planning authority prior to the commencement of development.

REASON: It is considered reasonable that the payment of a contribution be required in respect of the public infrastructure and facilities benefiting development in the area of the Planning Authority

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and which is provided, or which is intended to be provided by, or on behalf of the Local Authority.

Note on above Condition:

Please note that with effect from 1st January 2014, Irish Water are now the Statutory Body responsible for both water and waste water services (excluding surface water). Accordingly, the contribution payable has been reduced by the amount of the contribution associated with these services. A separate charge will be levied by Irish Water in relation to the provision of water and/or wastewater treatment infrastructure and connections to same. Further details are available on the Irish Water website www.water.ie, Tel. (01) 6021000.

NOTE 1:

The applicant is advised that under the provisions of Section 34(13) of the Planning and Development Act 2000 a person shall not be entitled solely by reason of a permission to carry out any development.

NOTE 2:

The applicant is advised that the onus is on them to comply in full with the Building Control Regulations.

NOTE 3

The issue of encroachment or oversailing is a civil matter the applicant is advised that in the event of encroachment or oversailing of adjoining property, the consent of the adjoining property owner is required.

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Seen Hda

Senior Executive Planner

Endorsed:

[Signature]

Administrative Officer

Order: A decision pursuant to Section 34 of the PLANNING & DEVELOPMENT ACT 2000, AS AMENDED to GRANT PERMISSION for the above proposal subject to the *(13) to 9* condition(s) set out above is hereby made. *DNK*

Dated *30th* January, 2023

[Signature]

Senior Planner

Thereunto empowered by order of the Chief Executive, Fingal County Council C.E. No. 844 delegating to me all powers, functions & duties in relation to the council of the County of Fingal in respect of this matter.