

Grangegorman



Grangegorman
Development Agency
Gníomhaireacht Forbartha
Ghráinseach Ghormáin

Innovative Urban Quarter

Contemporary Healthcare Facilities

Modern Education Hub

Accessible Public Spaces



GDA Draft Strategic **PLAN** 2010

Appropriate Assessment Screening Report



APPROPRIATE ASSESSMENT SCREENING REPORT

in respect of

GRANGEGORMAN DEVELOPMENT AGENCY DRAFT STRATEGIC PLAN 2010

REPORT PURSUANT TO DEPARTMENT OF THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT
CIRCULAR LETTER SEA 1/08 AND NPWS 1/08 (15TH FEBRUARY 2008)

Prepared on behalf of

The Grangegorman Development Agency

by



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September, 2010



TABLE OF CONTENTS

1.0 INTRODUCTION AND EXECUTIVE SUMMARY

- 1.2 Consultation
- 1.3 Background Legislative Context
- 1.4 Methodology
- 1.5 Literature Review

2.0 DESCRIPTION OF THE PROPOSED GRANGEGORMAN DEVELOPMENT AGENCY DRAFT STRATEGIC PLAN 2010

3.0 NATURA 2000 SITES IDENTIFIED AT DUBLIN BAY

- 3.1 Natura 2000 Sites at Dublin Bay
- 3.2 The National Parks and Wildlife Service Policy for the Protection of Estuarine Habitats

4.0 IDENTIFICATION OF POTENTIAL SIGNIFICANT ADVERSE EFFECTS ON NATURA 2000 SITES

- 4.1 No Potential Direct Impacts on Natura 2000 Sites have been Identified in this Report
- 4.2 Identification of Indirect or Secondary Potential Significant Adverse Effects on Natura 2000 Sites
- 4.3 Standards of Effluent Treatment Required at Dublin Bay
- 4.4 The Municipal Wastewater Treatment Plant at Ringsend

5.0 ASSESSMENT OF SIGNIFICANT POTENTIAL ADVERSE EFFECTS ON NATURA 2000 SITES

- 5.1 *Grangegorman Draft Strategic plan 2010* informs the Design of the Management System for the Surface Water and Foul Water Sewage Network
- 5.2 Details of Mitigating Measures for Wastewater Infrastructure at Grangegorman
- 5.3 Capacity of the Ringsend Wastewater Treatment Facility to Cater for non-domestic/licensed trade discharges
- 5.4 Potential Cumulative Effects of the *Grangegorman Development Agency Draft Strategic Plan 2010* and Other Statutory Land Use Plans
- 5.5 The Implications of the Planning and Development Status of the Subject Site for the Purposes of the *Grangegorman Development Agency Draft Strategic Plan 2010*
- 5.6 Conclusions of the *Appropriate Assessment Screening Report*

6.0 CONCLUSIONS



1.0 INTRODUCTION AND EXECUTIVE SUMMARY

The Purpose of this Report is to undertake an *Appropriate Assessment Screening Report* in relation to the *Grangegorman Development Agency Draft Strategic Plan 2010*

Natura Environmental Consultants Ltd. was commissioned in September 2010 to review, and amend as required, an *Appropriate Assessment Screening Report* produced by Tom Phillips + Associates for the *Grangegorman Development Agency*. The *Appropriate Assessment* screening was carried out to assess the potential for significant adverse impacts on Natura 2000 sites resulting from the proposed *Grangegorman Development Agency Draft Strategic Plan 2010*. The purpose of the review is to ensure that the report sufficiently follows the guidance document “*Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities*”. This document was issued by the DoEHLG in December 2009 after the screening had been completed.

This *Appropriate Assessment Screening Report* should be read in conjunction with the *Strategic Environmental Assessment Environmental Report* that accompanies the *Grangegorman Development Agency Draft Strategic Plan 2010*.

- The *Appropriate Assessment Screening Report* has identified no direct potential significant adverse effects on Natura 2000 sites.
- This *Appropriate Assessment Screening Report* has identified potential secondary indirect adverse effects on Natura 2000 Sites at Dublin Bay due to regional deficiencies in the existing wastewater treatment plant at Ringsend.
- This report states that there would be no significant potential adverse effects to Natura 2000 Sites at Dublin Bay as a result of the *Grangegorman Development Agency Draft Strategic Plan 2010* in that the volume of drainage discharge to the combined public sewer system on North Circular Road and Grange Gorman Upper / Lower will be reduced through the separation of surface water and sewer drainage. Surface water drainage will be drained to a new surface water drain which will discharge directly into the River Liffey after being appropriately attenuated on site.
- It is our recommendation that there is no requirement for a *Stage II Habitats Directive Assessment* to be carried out in respect of the *Grangegorman Development Agency Draft Strategic Plan 2010*.



1.2 Consultation

A statutory period of public consultation process under Section 12 of the Grangegorman Development Agency Act, 2005 will be undertaken whereby notification of this Appropriate Assessment Screening Report will be advertised specifying the statutory period within which time submissions may be made to the Grangegorman Development Agency. The Appropriate Assessment Screening Report will be advertised in tandem with the statutory public notice for the Grangegorman Development Agency Strategic Plan 2010 and the Grangegorman Development Agency Strategic Plan 2010 Strategic Environmental Assessment Environmental Report.

In accordance with the Department of Environment, Heritage and Local Government Circular Letter of 15th February 2008, the National Parks and Wildlife Service (NPWS) has a formal consultation role through the Development Applications Unit. In this regard the Appropriate Assessment Screening Report has been submitted to the Eastern Division of the National Parks and Wildlife Service, through the Department of Environment, Heritage and Local Government's Development Applications Unit.

1.3 Background Legislative Context

This *Appropriate Assessment Screening Report* has been prepared in accordance with the requirements of Article 6(3) of the *EU Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive)*. *EU Directive 92/43/EEC (Habitats Directive)* provides legal protection for designated habitats and species of European importance. The *Habitats Directive* was transposed into Irish law by the *European Communities (Natural Habitats) Regulations, SI 94/1997*. Articles 6(3) and 6(4) of the *Habitats Directive* require the preparation of an appropriate *Appropriate Assessment* of plans to be carried out in order to identify potential significant adverse effects on European Sites including *Special Protection Areas (SPAs)* and *Special Areas of Conservation (SACs)*.

Under the title '*Screening for possible Impacts*' the *Department of the Environment Heritage and Local Government*, by way of *Circular Letter* dated 15th February 2008, has stated the following:

"any draft land use plan (development Plans, local area plans, regional planning guidelines, schemes for strategic development zones) or amendment/variation to it proposed under the Planning and Development Act (as amended) must be screened for any potential impact on areas designated as Natura 2000 sites (normally called Special Areas of Conservation (SACs) or Special Protection Areas (SPAs))."

Article 6(4) of the Directive states that '*the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*' This *Appropriate Assessment Screening Report* therefore provides an assessment of the likelihood of potential significant adverse effects on the integrity of the protected sites identified in this report, with reference to the conservation objectives of Natura 2000 sites, in relation to the



Grangegorman Development Agency Strategic Plan 2010 and for the purposes of statutory public consultation.

1.4 Methodology

This *Appropriate Assessment Screening Report* has been prepared in accordance with the methodology of the “*Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*”, (*Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC*), published by the European Commission), and following the DoEHLG (2010) guidance document.

The *Appropriate Assessment* procedure firstly identifies the potential adverse effects on the protected sites identified, where such effects cannot be ruled out and secondly provides an assessment of the significance of potential adverse effects on the integrity of protected sites. This methodology therefore provides for an assessment of measures that would mitigate against any significant adverse effects on Natura 2000 Sites including cumulative effects.

In compliance with the procedure set out under “*Managing Natura 2000 sites: The Provisions of Article 6 of the Habitat's Directive 92/43/EEC*”, the Screening for an appropriate *Appropriate Assessment* is undertaken through the following stages:

- (i) Description of the Proposed Planning Scheme;
- (ii) Identification of Natura 2000 sites potentially affected;
- (iii) Identification and description of individual and cumulative impacts likely to result from the Planning Scheme;
- (iv) Identification and description of individual and cumulative impacts likely to result from the *Grangegorman Development Agency Draft Strategic Plan 2010*;
- (v) Assessment of the significance of the impacts identified on the integrity of protected sites; and
- (vi) Recommendations for the preparation, or not, of a Stage II *Appropriate Assessment*.

If it is evident from the methodology of the *Appropriate Assessment Screening Report* that the plan would result in potential significant adverse effects on Natura 2000 sites, the planning scheme should not proceed without an assessment of alternative solutions. All recommendations for the preparation of a *Stage II Appropriate Assessment* are carried out on this basis.

The *Appropriate Assessment Screening Report* procedure may therefore determine that there are no potential direct significant adverse effects on protected sites. In addition the *Appropriate*



Assessment methodology addresses potential secondary or cumulative potential significant adverse effects, which may be mitigated by appropriate measures to ensure that there will be no potential significant adverse effects on Natura 2000 sites.

1.5 Literature Review

As part of the *Appropriate Assessment* screening process for the *Grangegorman Development Agency Draft Strategic Plan 2010*, particular reference has been made to the following documents:

- *Managing Natura 2000 Sites. The provisions of Article 6, of the 'Habitats' Directive 92/43/CEE.*
- *Guidance document on Article 6(4) of 'Habitats Directive' 92/43/EEC.*
- Department of the Environment Heritage and Local Government (DoEHLG) *Circular letter SEA 1/08 and NPWS 1/08*, dated 15th February 2008.
- Department of Environment, Heritage and Local Government (DoEHLG) (2010). *Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities*. Unpublished report.

The *Appropriate Assessment Screening* decision has been determined on the basis of a desk-top study of currently published material, including the following documentary sources:

- *Grangegorman Development Agency Draft Strategic Plan 2010.*
- *Grangegorman Development Agency Draft Strategic Plan 2010, Strategic Environmental Assessment Environmental Report.*
- Mapping Information and Site Synopses form *National Parks and Wildlife Service* Database.
- National Development Plan/National Spatial Strategy.
- Regional Planning Guidelines for the Greater Dublin Area.
- Dublin City Development Plan 2005 – 2011.
- "Greater Dublin Strategic Drainage Study - Regional Drainage Policies – Technical Document - Volume 2 - New Development". Dublin City Council, March 2005.
- Strategic Environmental Assessment of the Greater Dublin Strategic Drainage Strategy 2008.



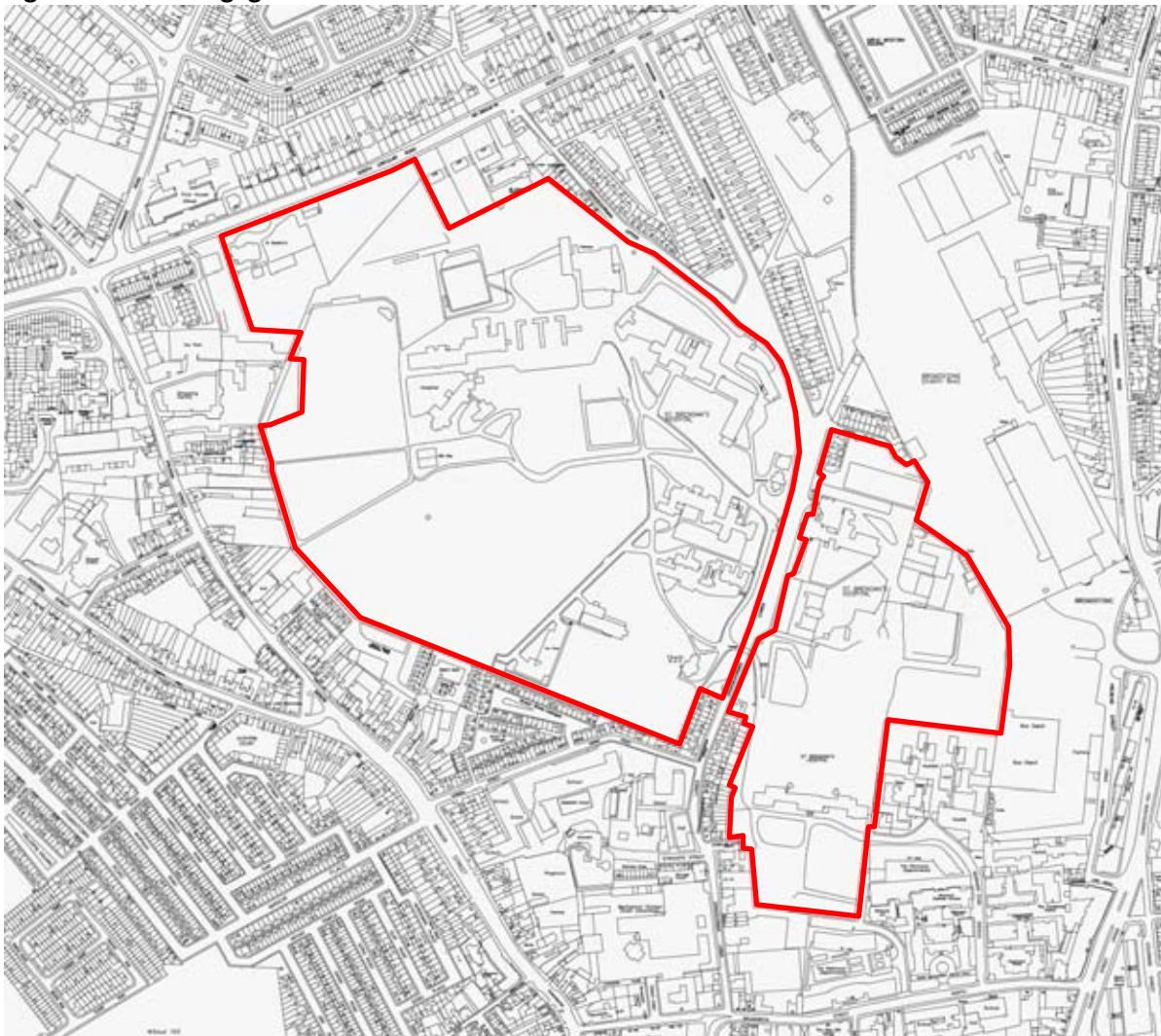
- *A Review of and Report on Certain Matters Relating to Dublin City Council's Ringsend Wastewater Treatment Plant*, for the Minister for Environment, Heritage and Local Government Mr. John Gormley TD, October 2008.
- Poolbeg Planning Scheme EIS February 2009.
- Dublin Docklands Development Authority Draft Dublin Docklands Area Master Plan 2008, Appropriate Assessment, July 2008, Natura Environmental Consultants.
- Poolbeg Planning Scheme EIS February 2009, Cunnane Stratton Reynolds.
- "Greater Dublin Strategic Drainage Study - Regional Drainage Policies – Technical Document - Volume 3 - Environmental Management", Dublin City Council, March 2005.
- Natura Environmental Consultants Ltd. (2009) Ecological Assessment of the Health Services Executive Replacement Facility - Grangegorman (Unpublished Report)
- Other Relevant Plans and Guidelines.

The documents listed above provide information relevant for an assessment of the potential significant adverse impacts on Natura 2000 Sites that could result from the *Grangegorman Development Agency Draft Strategic Plan 2010*.

2.0 DESCRIPTION OF THE PROPOSED GRANGEGORMAN DEVELOPMENT AGENCY DRAFT STRATEGIC PLAN 2010

The *Grangegorman Development Agency Draft Strategic Plan 2010* consists of a written statement and a plan indicating the manner in which it is intended to develop the site. The *Grangegorman Development Agency Draft Strategic Plan 2010* will facilitate the redevelopment of the St. Brendan's Hospital site in Grangegorman, Dublin to provide for a modern campus for the Dublin Institute of Technology (DIT), to provide the Health Service Executive (HSE) with upgraded primary health and social care facilities and to provide other facilities including educational, residential and commercial development.

Figure 1. The Grangegorman Site



Source: Grangegorman Development Agency, Reproduced by Tom Phillips + Associates under Licence AR0008609

The area identified at Grangegorman comprises approximately 29.4 hectares of underdeveloped



city centre lands located in the Arran Quay Ward of Dublin in the district of Grangegorman, north of the River Liffey and south of the Royal Canal, approximately 1 kilometre from Dublin's City Centre. It comprises the site of St. Brendan's Hospital, a Psychiatric Hospital owned and run by the *Health Services Executive*.

The *Grangegorman Development Agency Draft Strategic Plan 2010* provides details relating to the provision of services on site, including waste water & sewerage facilities in the area. The plan also includes proposals relating to the minimising of any adverse effects on the environment arising from the redevelopment of the site and has set out environmental objectives.



3.0 NATURA 2000 SITES IDENTIFIED WITHIN 15KM OF THE PROPOSED DEVELOPMENT

The Natura 2000 Network is a European designation comprising ecologically important sites. *Special Protection Areas* and *Special Areas of Conservation* are designated sites for protection under either the *Habitats Directive* or the *Birds Directive* (Council Directive 79/409/EEC). The Natura 2000 sites that could be potentially affected by the proposed development are listed in *Table. 1* of this report below.

Table 1 : List of Natura 2000 Sites (SPA's and cSAC's) within 15km of the .proposed Grangegorman Development Plan (as listed on NPWS.ie)

Site Code	Name	Designation	Distance (km) from proposed development	
IE0004006	Bull Island (Includes L.T.M.)	SPA*	7 km north-east	
IE0004024	Sandymount Strand/ River Tolka Estuary	SPA	4 km north-east	
IE0004016	Baldoyle Bay	SPA	13km north north-east	
IE0004024	Sandymount Strand/Tolka Estuary	SPA	4km east	North Bull Island
IE0004025	Broadmeadow/Swords Estuary	SPA	13km north north-east	
IE0004113	Howth Head Coast	SPA	13km north-east	
IE0004117	Ireland's Eye	SPA	15km north-east	
IE0004172	Dalkey Islands	SPA	15km south-east	
IE0000206	North Dublin Bay	cSAC**	4km east	
IE0000210	South Dublin Bay	cSAC	4.5km south east	
IE0000202	Howth Head Coast	cSAC	13km north-east	
IE0000199	Baldoyle Bay	cSAC	13km north north-east	
IE0000205	Malahide Estuary	cSAC	13km north-east	
IE0001209	Glenasmole Valley	cSAC	14.5km south	
IE0001398	Rye Water Valley/Carton	cSAC	6km west	
IE0002122	Wicklow Mountains	cSAC	16.5 km south east	
IE0002193	Ireland'S Eye	cSAC	15km north-east	

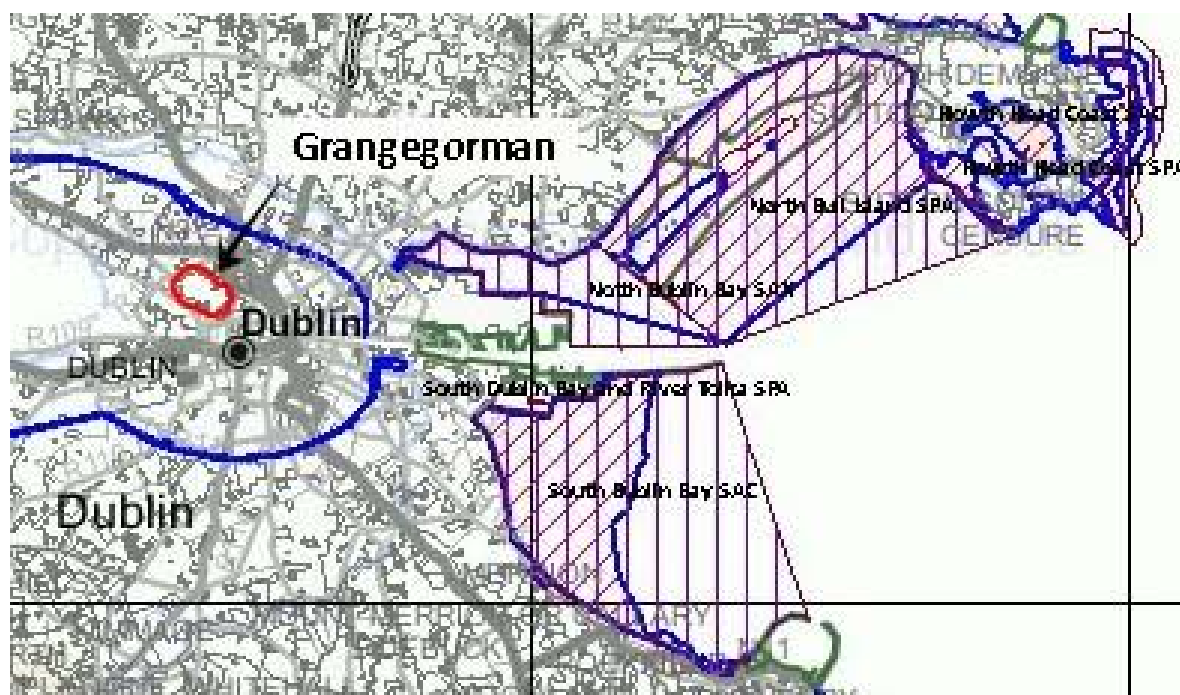
, * SPA Special Protection Area for Birds, designated under the EU Birds Directive (79/409/EEC)

** cSAC candidate Special Area for Conservation designated under the EU Habitats Directive (92/43/EEC)

There are 18 designated conservation areas within a 15km radius of the proposed development, 9 of these are SPA's and 9 are SAC's. None of them is directly connected to the proposed site. The Grangegorman site has an indirect hydrological connection to Dublin Bay, (located about 6km to the east) due to surface and foul water discharges from the site which will ultimately end up in Dublin Bay .Only those Natura 2000 sites which are located in Dublin Bay are considered to be potentially impacted by the proposed Grangegorman development Plan.

It is important to note that the *Grangegorman Development Agency Draft Strategic Plan 2010* is not directly connected with or necessary to the proper management of the Natura 2000 listed sites due to geographical proximity or land-take. Figure 2. below shows the location of the subject lands with reference to Natura 2000 sites that could potentially be impacted.

Figure 2: Shows Location of Dublin Bay SPA & SAC



Source: National Parks and Wildlife Service (www.npws.ie)

3.2 The National Parks and Wildlife Service Policy for the Protection of Estuarine Habitats

The habitats of Dublin Bay comprise substantial areas of coastal, estuarine and marine habitats. *The National Parks and Wildlife Service* has specific conservation objectives for marine habitats, which include objectives for estuarine Mudflats and Sandflats. The ecological communities of these areas are sensitive to the anthropogenic impacts of water pollution, sedimentation and nutrient enrichment. Due to the qualifying criteria identified in *Table 2* of this report below, it is considered that a deterioration in the water quality status within the drainage catchment area could have potential adverse effects on the integrity of the listed Natura 2000 sites at Dublin Bay.

For the purposes of the *Appropriate Assessment Screening* report, the integrity of the site is defined as:

“the coherence of the site’s ecological structure and function, across its whole area, or the habitats, complex of habitats and/or populations of species for which the site is or will be classified.” (PPG 9, UK Department of the Environment, October 1994).



The policy of the NPWS¹ on the preservation of the ecological habitats and communities of estuarine sites is provided below:

“The total national resource of mudflats and sandflats must be maintained at, or restored to, favourable conservation status. This may be achieved through the following objectives:

- *Maintain the range of mudflats and sandflats as stable within Ireland and prevent the equivalent of a 1% loss per annum, and no more than 10% loss in total;*
- *Maintain the distribution of mudflats and sandflats as stable across the national range and prevent significant changes in its distribution pattern;*
- *Prevent the equivalent of a 1% loss in surface area per annum, and no more than 10% loss in total;*
- *Prevent any reduction in the diversity of floral and faunal species arising from human activities;*
- *Ensure there is no reduction in area or disturbance of intertidal sea grass or biogenic communities;*
- *Ensure individual operations or activities, in combination with other operations or activities, do not cause a change in typical species composition in more than 25% of the area occupied by each of the principal sediment community types;*
- *Ensure the water quality in tidal mudflats and sandflats is of sufficient quality to maintain the integrity of the principal community types; and*

¹ Source: <http://www.npws.ie/en/Marine/MarineHabitats/>



- *Ensure that there is a sufficiently large habitat of suitable quality available to support the long term survival of species associated with this habitat.”*

The significance of the potential adverse effects on the integrity of the Natura 2000 Sites identified will be assessed in *Section 4* of this report below.

Table 2: List of Natura 2000 sites for which Potential Adverse Effects are Identified

Site	Site Name	Description	Qualifying Features
000206	NORTH DUBLIN BAY cSAC	<p>This site covers the inner part of north Dublin Bay, the seaward boundary extending from the Bull Wall lighthouse across to the Martello Tower at Howth Head. The site holds good examples of ten habitats that are listed on Annex I of the E.U. Habitats Directive;</p> <p>and one Annex II species</p> <p>Several of the wintering bird species have populations of international importance, while some of the invertebrates are of national importance. North Bull Island has been designated a Special Protection Area under the E.U. Birds Directive and it is also a statutory Wildfowl Sanctuary, a Ramsar Convention site, a Biogenetic Reserve, a Biosphere Reserve and a Special Area of Natural Interest site.</p>	<p>Annex 1 Habitats;</p> <p>Mudflats and sandflats not covered by seawater at low tide</p> <p>Salicornia and other annuals colonizing mud and sand</p> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)</p> <p>Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</p> <p>Annual vegetation of drift lines</p> <p>Embryonic shifting dunes</p> <p>Shifting dunes along the shoreline with <i>Ammophila arenaria</i> * (white dunes)</p> <p>Humid dune slacks</p> <p>Spartina swards (<i>Spartinion maritima</i>)</p> <p>Fixed coastal dunes with herbaceous vegetation (grey dunes)*</p> <p>Annex II species;</p> <p><i>Petalophyllum ralfsii</i></p>
000210	SOUTH DUBLIN BAY cSAC	<p>South Dublin Bay is a coastal system with extensive sand and mudflats,. South Dublin Bay is also an internationally important bird site. The qualifying interest of the site is;</p>	<p>Annex 1 Habitat;</p> <p>Mudflats and sandflats not covered by seawater at low tide</p>
004006	NORTH BULL ISLAND SPA	<p>The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following Annex I bird species:</p> <p>The site is also of special conservation interest for holding an assemblage of over 20,000 wintering waterbirds.</p>	<p>Annex I bird species;</p> <p>Light-bellied Brent Goose, Shelduck, Teal, Pintail, Shoveler, Oystercatcher, Ringed Plover, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Turnstone and Black-headed Gull.</p>



		<p>The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds. Two separate Statutory Nature Reserves cover much of the island east of the Bull Wall and the surrounding intertidal flats. North Bull Island is also a Wildfowl Sanctuary, a Ramsar Convention site, a Biogenetic Reserve, a Biosphere Reserve and a Special Area Amenity Order site.</p>	
004024	SOUTH DUBLIN BAY AND RIVER TOLKA ESTUARY SPA	<p>The South Dublin Bay and River Tolka Estuary SPA comprises a substantial part of Dublin Bay. It includes the intertidal area between the River Liffey and Dun Laoghaire, and the estuary of the River Tolka to the north of the River Liffey, as well as Booterstown Marsh. A portion of the shallow marine waters of the bay is also included. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following Annex I bird species:</p>	<p>Annex I bird species</p> <p>Light-bellied Brent Goose, Oystercatcher, Ringed Plover, Golden Plover, Grey Plover, Knot, Sanderling, Dunlin, Bar-tailed Godwit, Redshank, Black-headed Gull, Roseate Tern, Common Tern and Arctic Tern.</p>

...Source: WWW.NPWS.ie



4.0 IDENTIFICATION OF POTENTIAL SIGNIFICANT ADVERSE EFFECTS ON NATURA 2000 SITES

For the purposes of this *Appropriate Assessment Screening* assessment, the potential effects of the proposed *Grangegorman Development Agency Draft Strategic Plan 2010* will be assessed with reference to potential significant adverse effects on the conservation objectives of those Natura 2000 sites where significant impacts cannot be ruled out. We refer in particular to the protected sites at North Dublin Bay and South Dublin Bay, which are located approximately 5 km to 8 km from the subject lands respectively.

4.1 No Potential Direct Impacts on Natura 2000 Sites have been Identified in this Report

It is our professional opinion that due to the distance of the subject lands from Natura 2000 sites that there will be no direct physical disturbance or loss of habitat to protected sites as a result of the development of the subject lands at Grangegorman. There will be no reduction in species density or changes in indicators of conservation value as a direct result of the *Grangegorman Development Agency Draft Strategic Plan 2010*.

4.2 Identification of Indirect or Secondary Potential Significant Adverse Effects on Natura 2000 Sites - Potential Indirect Significant Adverse Effects of the Land Use Plan on Natura 2000 Sites at Dublin Bay due to Current Deficiencies in Public Wastewater Infrastructure

It is considered that the surface water runoff and foul water drainage from the subject lands could constitute a potential indirect or secondary significant potential adverse effect of the proposed development on water quality at Dublin Bay within the designated area of Natura 2000 sites. This could result in a potential adverse impact on the structure and function of the habitats in Dublin Bay due to a risk of degradation to the habitat that supports wildlife in the Natura 2000 sites. This assessment is made with reference to indicators of environmental water quality at Dublin Bay and consequent potential significant adverse effects on the ecological integrity of protected sites at the locations identified in Section 2 of this report above. The potential adverse effects on Natura 2000 sites are therefore considered to be restricted to the potential transboundary effects of the site wastewater infrastructure including potential significant adverse effects due to capacity constraints of the municipal treatment works at Ringsend on the Poolbeg peninsula.

- The potential impact of the *Grangegorman Development Agency Draft Strategic Plan 2010* on water quality is assessed in the context of predictable impacts at construction and operational phases, which could have potential adverse effects on the chemical water quality and biological water quality of receiving
- Uncontrolled or untreated surface water discharges and run-off including pollution incidents and non-attenuation of surface water drainage during construction.
- Uncontrolled or untreated surface run-off or discharge of water and other materials from site operation.



- Infrastructural deficiency due to combined stormwater and foulwater systems from the proposed development area during operation phases.
- Incapacity of municipal wastewater infrastructure to cater for additional loads including suspended solids, fuels, oils, hazardous chemicals, foul water and solid waste.

4.3 Standards of Effluent Treatment Required at Dublin Bay

The effluent standards for the treatment are required to satisfy the requirements of the following:

- The Dublin Bay Water Quality Management Plan (DBWQMP)
- The Urban Waste Water Treatment Regulations(SI No.419 of1994)
- The Quality of Bathing Water Regulations (SI. No.155 of 1992)

On the basis of the desk-top study carried out, it is unknown whether the Wastewater Treatment Plant at Ringsend is currently in compliance with the *Urban Wastewater Directive* (S.I. No. 254 of 2001) which sets standards of compliance for the discharge of Nitrogen (N) and Phosphorous (P) by the municipal wastewater treatment plant. It is therefore considered that the current effluent quality may need to be improved to protect the environment in line with the requirements of existing national and European legislative requirements. In this regard the recent report *A Review of and Report on Certain Matters Relating to Dublin City Council's Ringsend Wastewater Treatment Plant* (October 2008) states that the European standards "*are unlikely to be met by the present treatment system where 'sensitive area' restrictions apply*".

4.4 The Municipal Wastewater Treatment Plant at Ringsend - Issues have been identified in relation to the Capacity of the Wastewater Treatment Plant for Dublin at Ringsend - The operation of the Ringsend Wastewater Treatment Plant is of significant importance in respect of water quality in Dublin Bay

The design capacity and operational efficiency of the sewage infrastructure and the capacity of the municipal wastewater treatment facility at Ringsend on the Poolbeg peninsula is a primary determinant of the water quality in Dublin Bay. In this regard treated effluent from Ringsend wastewater treatment plant is discharged to the Liffey Estuary east of the Poolbeg generating station. The potential implications of an increased operational load of the development of lands at Grangegorman on the foul water treatment infrastructure has therefore been assessed with reference to the potential adverse effects on the Natura 2000 sites at Dublin Bay.

It is understood that the capacity of the plant may be currently under-designed in relation to the cumulative impact of development on the pollution load that is currently discharged to the public sewer from existing development in Dublin City. The waste water treatment plant on the peninsula is due to expand its ultimate capacity, however this may not be sufficient for the future needs of the catchment region due to land constraints at Poolbeg. It is considered that a second major treatment plant may be required at another location, which could be expected to have a substantial lead-in time.



It is our opinion based on the above information that there could be potential adverse effects on the integrity of Natura 2000 sites at Dublin Bay due to the capacity issues of the wastewater treatment facility at Ringsend. The significance of these potential adverse effects and the proposed detailed design measures are discussed below.



5.0 ASSESSMENT OF SIGNIFICANT POTENTIAL ADVERSE EFFECTS ON NATURA 2000 SITES

Review of Infrastructural Provisions for Wastewater Management and Detailed Design Measures Proposed to Separate the Foul and Surface Water Lines in the Grangegorman Area – The Requirement for Wastewater Discharge Licensing - Capacity of the Ringsend Treatment Plant to Cater for Trade Effluent Discharges

The *Appropriate Assessment Screening Report* has considered the following factors in respect of the potential for significant adverse effects on protected sites at Dublin Bay that could result from the *Grangegorman Development Agency Draft Strategic Plan 2010*:

- (i) The proposed *Grangegorman Development Agency Draft Strategic Plan 2010* would have no direct effects on the integrity of Natura 2000 sites;
- (ii) On site infrastructural measures for wastewater management are proposed to ensure that indirect or secondary potential significant adverse effects on the integrity of Natura 2000 sites would be mitigated;
- (iii) The significance of potential adverse effects on Natura 2000 sites is assessed with reference to the requirement for discharge licences for the proposed *Health Service Executive* development and the *Dublin Institute of Technology* facilities at *Grangegorman*;
- (iv) The design of the municipal wastewater treatment facility at Ringsend has been identified as having capacity for the treatment of trade effluents from both industry and other non-domestic users.

5.1 The *proposed Grangegorman Draft Strategic plan 2010* Strategic plan 2010 will inform the Design of the Management System for the Surface Water and Foul Water Sewage Network and Surface Water Runoff at Grangegorman

The subject site is currently occupied by site of St. Brendan's Hospital, a Psychiatric Hospital owned and run by the *Health Services Executive*. The redevelopment of the site under the provisions of the *Grangegorman Development Agency Draft Strategic Plan 2010* will involve the construction of two new separate systems that will connect independently into Dublin City Council's surrounding drainage system. In other words the existing sewerage system in the area will be used for wastewater connections from the Grangegorman site only, with surface water being dealt with separately.

The existing combined sewer servicing the Grangegorman site and St. Brendans Hospital currently carries stormwater and foul water to the wastewater treatment plant at Ringsend. The additional net load resulting from the *Grangegorman Development Agency Draft Strategic Plan 2010* would therefore be avoided by the installation of a dual system as proposed by the *Implementation Programme* of the *Grangegorman Development Agency Draft Strategic Plan 2010*. The separate system for the management of surface water will include on-site attenuation



and pollution control measures for surface water runoff prior to discharge to the River Liffey. As the River Liffey is a nationally important salmon river, the surface water drainage system will be designed in consultation with the Eastern Regional Fisheries Board to ensure no adverse effects on the water quality or the flow regime of the river.

5.2 Details of Design Features for Wastewater Infrastructure at Grangegorman - Dual Systems to Replace Existing Combined System and the incorporation of Sustainable Urban Drainage Schemes (SUDs) into the scheme

The *Dublin City Council Drainage Division* has confirmed that due to the removal of the surface water run-off from the existing buildings on the Grangegorman site from the existing Dublin City Council combined sewers, additional capacity for the increased wastewater discharge coming from the redevelopment will be available. It is therefore considered that these design features will mitigate against potential adverse effects of the additional loading on the public wastewater infrastructure.

The drainage design will provide stormwater management to ensure that both runoff quantity and quality are addressed. In this regard it is recommended in the *Grangegorman Draft Strategic plan 2010* that SUDs measures are incorporated into the proposed development design for on-site retention systems including attenuation ponds or underground tanks, underground attenuation basins and filter drains.

The stormwater management system will be connected to the proposed 600 mm diameter surface water sewer proposed from Smithfield Plaza to Grangegorman Upper, which will service the redevelopment proposed for the Grangegorman site. In this context separate foul and surface water lines are designated to replace the existing combined system servicing the existing hospital development on the site.

It is understood therefore that the planned sewage infrastructure on site will be installed on the basis of the stated requirements of the *Grangegorman Draft Strategic Plan 2010*. In this regard the following policies have been identified in the *Grangegorman Draft Strategic Plan 2010* in relation to Site Engineering and Infrastructure Objectives:

1. GDA will mandate compliance with Department of the Environment 'Best Practice Guidelines' for Construction and Demolition Waste Management in the procurement of all construction works.
2. GDA will put in place a waste management strategy to ensure that best practice in this area is integrated across the site.
3. GDA will ensure all site drainage systems are built to meet SUDS (Sustainable Urban Drainage Systems) standards and in all respects meet the requirements of Dublin City Council Drainage Division's standards and "Code of Practice".

It is important to note that planning permission is granted only where the planning authority is satisfied that development is consistent with the Plan, including specific policies and objectives



for the provision of wastewater services. However, individual projects arising from the proposed *Grangegorman Draft Strategic Plan 2010*, may also require individual Habitats Directive Assessment Screening.

The *Grangegorman Development Agency Draft Strategic Plan 2010* also states the following:

“The drainage design strategy will combine various techniques of storm water management and treatment to ensure that both runoff quantity and quality are addressed. A primary aim is to incorporate as many of the following SUDS measures into the redevelopment as possible:

- *Infiltration systems including infiltration trenches, infiltration basins, permeable paving, soak-aways and green roofs (roof gardens)*
- *Filtration systems including swales, bio-retention systems and filter strips*
- *Constructed wetlands including large ponds and stormwater wetlands*
- *Retention Systems including retention ponds*
- *Detention systems including underground tanks, underground attenuation, detention basins and filter drains*
- *In addition extreme storm events can be accommodated by designing landscaped areas or playing pitches to temporarily flood and thus control the rate of outflow from the site”*

The proposed design features should prevent any significant adverse impacts on Natura 2000 sites resulting from the additional loading on the public wastewater infrastructure. in Dublin Bay. It is important to note that any future development applications of the site area as part of the *Strategic Plan* for the area will be subject to satisfactory planning application documentation including engineering details of the foul water drainage and connections in line with the recommendations of the *Grangegorman Development Agency* and the *Grangegorman Development Agency Draft Strategic Plan 2010*. It is also important to note that these planning applications will also be subject to individual Appropriate Assessment as appropriate.

5.3 Capacity of the Ringsend Wastewater Treatment Facility to Cater for non-domestic/licensed trade discharges - Requirement of the Development to Obtain Discharge Licences

The principal load on the wastewater infrastructure at the Grangegorman site will be from the level of discharge as a result of licensed activities on site. Approximately 60% of the capacity at the Ringsend Wastewater Treatment Plant allocated for licensed flows and loads of licensed industry in the design load at Ringsend, is utilized at present. The existing capacity issues of the Ringsend Wastewater Treatment Plant are principally due to a design stage estimation of the population equivalents in the Greater Dublin Area, which has led to an under design of the plant capacity primarily due to the level of discharge from domestic and commercial users.



Trade effluent is regulated by the licensing process under the *EPA Acts* for those activities requiring an IPPC license and the *Water Pollution Acts* for trade discharges licensed by local authorities. Dublin City Council are the statutory body with the responsibility of issuing and monitoring of licensed discharges to ensure compliance with the Local Government (Water Pollution) Acts 1977-1990. The future health care development at Grangegorman and the *Dublin Institute of Technology* development will require a discharge license from *Dublin City Council* for connection to the public sewerage system. Licenses should only be issued with conditions attached which stipulate the maximum allowable discharges to the public sewer in terms of pollution load and flow. It is the responsibility of Dublin City Council to ensure that the performance achieved under IPPC is replicated in the trade license area.

The recommendations of the *Review of and Report on Certain Matters Relating to Dublin City Council's Ringsend Wastewater Treatment Plant*: for Minister John Gormley in October 2008 are as follows:

- The monitoring, control and measurement of all licensed trade discharges in each constituent local authority area contributing to the Ringsend Works should be significantly improved so that actual load versus allowable load can be readily quantifiable in terms of kg of BOD per day.
- Trade licenses should incorporate requirements for continuous review and improvement in a similar manner to IPPC licenses.
- All discharges from commercial premises should be licensed and routinely monitored.
- The planning and environmental controls of the proposed Grangegorman re-development should ensure that effluent discharges are limited to the needs of DCC with respect to the Ringsend Wastewater Treatment Plant.
- A catchment management strategy for effluent discharge in the urban area is necessary for the water quality status of the River Liffey and to avoid overloading of Ringsend WWTP.

5.4 Potential Cumulative Effects of the *Grangegorman Development Agency Draft Strategic Plan 2010* and Other Statutory Land Use Plans - Assessment of Significance of Potential Cumulative Effects

In line with the precautionary principle the cumulative effects of the *Grangegorman Development Agency Draft Strategic Plan 2010* in combination with other plans for the area are assessed.

There may be potential adverse effects on the Natura 2000 sites at Dublin Bay due to the cumulative effects of the proposed *Strategic Plan* with other plans pertaining to the *Greater Dublin Area* on the basis of the deficiency identified in the capacity of the municipal wastewater treatment plant at Ringsend. It is considered however that due to the detailed design details for the plan and licensing controls on the effluent to wastewater treatment plant at Ringsend that



the potential indirect adverse effects on Natura 2000 sites as a result of the *Grangegorman Development Agency Draft Strategic Plan 2010* will not be significant .

An assessment of the data available on effluent discharge volumes to the public combined sewer for the pre and post development arrangements at the Grangegorman site has been undertaken by Horgan Lynch Consulting Engineers and this assessment indicated the following in summary:

- The estimated area of the site with existing surface water drainage (building roofs, car-parking, yards and roadways) is 5 hectares and drains to the combined public sewer system on North Circular Road and Grangegorman Upper / Lower.
- Using the mean monthly figures for the greatest daily total rainfall from MET Eireann data from 1961 to 1999 (40 mm per day), a design daily surface water loading discharge from the site to the public sewer system can be estimated as 2,000m³ (50,000m² x 0.04m = 2000m³). This volume will be removed from the existing combined sewer system and will be drained to a new surface water drain which will discharge directly to the River Liffey of on-site attenuation
- The estimated current foul effluent daily discharge from the site is 200m³.
- The assessment of the foul drainage loading from the proposed development (as detailed in Section 4 of the *Grangegorman Development Agency Draft Strategic Plan 2010*) of the site into the public sewer system is estimated as 1,254m³ daily flow.

Table 3 : Assessment of the Data Available on Effluent Discharge Volumes

Discharge	Pre- Development	Post Development
Estimated design daily surface water discharge to public combined sewer	2,000 m ³	0
Estimated foul effluent daily discharge from the site	200 m ³	1,254 m ³
Total	2,200 m³	1,254 m³

Source: Horgan Lynch as extrapolated from details presented in the *Grangegorman Development Agency Draft Strategic Plan 2010*

In conclusion, taking into account the proposed design features to prevent the pollution of waters arising from development at Grangegorman as part of this screening assessment, it can be concluded that there are no likely to significant effects on the Natura 2000 sites identified in this report.



5.5 The Implications of the Planning and Development Status of the Subject Site for the Purposes of the *Grangegorman Development Agency Draft Strategic Plan 2010*

The *Grangegorman Development Agency Strategic plan 2010* is to be prepared by the *Grangegorman Development Agency* as required under *Section 12* of the *Grangegorman Development Agency Act 2005*.

The development of the site will be carried out through the mechanisms as provided for in terms of the *Planning and Development Act, 2000 – 2010*. *Section 34(2)(a)* of the *Planning and Development Act, 2000 – 2010* states that a planning authority shall be restricted to considering the proper planning and sustainable development of the area, *inter alia*, to the provisions of the development plan. The details of site services are provided in the *Grangegorman Development Agency Draft Strategic Plan 2010*, which indicates the manner in which it is intended that the site is to be developed, in particular in relation to proposals for the provision of services on the site, including the provision and appropriate design of waste and sewerage facilities, that will ensure that there are no adverse effects on the Natura 2000 sites.

It is our professional opinion that Dublin City Council as Planning Authority has the responsibility to ensure that the site at Grangegorman will be developed in accordance with the provisions of the *Dublin City Development Plan 2005-2011* (or later Dublin City Development Plans or in accordance with the provisions of any SDZ Planning Scheme in force for the area) and the *Grangegorman Development Agency Draft Strategic Plan 2010* with specific reference to the provision of infrastructural facilities to service the subject lands. These must be adhered to in full in order to ensure that no adverse impacts will occur to the Natura 2000 sites in Dublin Bay.

5.6 Conclusions of the *Appropriate Assessment Screening Report* of Potential Significant Adverse Effects of the *Grangegorman Development Agency Strategic plan 2010* on Natura 2000 Sites

Based on the results of this desk study and for the purposes of assessing the significance of potential adverse effects on Natura 2000 Sites at Dublin Bay, the *Grangegorman Development Agency Draft Strategic Plan 2010* will not result in significant potential adverse effects on Natura 2000 sites subject to the detailed design features being implemented correctly and to the appropriate control and treatment of trade effluents at the municipal wastewater treatment facility at Ringsend.

6.0 CONCLUSIONS

The potential significant adverse effects on the integrity of Natura 2000 sites listed in *Section 2.2* of this report have been identified. On the basis of the precautionary principle, potential secondary or indirect cumulative adverse effects to the integrity of Natura 2000 sites at Dublin Bay have been identified due to deficiencies in the municipal wastewater treatment plant at Ringsend. If there are potential impacts then it needs stage 2? If detailed design is applicable then there should be no impacts. Can we say for certainty that this is the case??

It is our professional opinion that the mitigation measures proposed as part of the *Grangegorman Draft Strategic plan 2010*, in addition to the requirements of Trade Effluent



Licenses in line with the upgraded operation of the municipal wastewater treatment plant at Ringsend, will ensure that the water quality of the Natura 2000 sites will not be put at risk by future development of the site.

It can be objectively concluded that there is not likely to be significant potential adverse effects arising from the *Grangegorman Draft Strategic plan 2010* with reference to Natura 2000 sites at Dublin Bay, either alone or in combination with other plans. It is therefore our professional opinion that there would be no requirement to subject the proposed *Grangegorman Draft Strategic plan 2010* to a *Stage II Habitats Directive Assessment*.



Grangegorman



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