

Cork County Council
County Hall
Cork

**Cork Harbour Main
Drainage Scheme**

**Environmental Impact
Statement**

**Proposed Waste Water
Treatment Plant at
Shanbally, Co. Cork**

Volume III

February 2008

Cork Harbour Main Drainage Scheme

Environmental Impact Statement

Proposed Waste Water Treatment Plant at Shanbally, Co. Cork

Volume III

Issue and Revision Record

Rev	Date	Originator	Checker	Approver	Description
A	Jan 2008	OF/EB	PK	FMcG	Final Draft Issue
B	Feb 2008	OF/EB <i>OF/EB Dennett</i>	PK <i>PK</i>	FMcG <i>FMcG</i>	Final Issue

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Appendix 1A

Consultation Letter and Consultee Responses

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Our Ref. OF/kos

«Title»«NameContact»
«SectionDepartment»
«Company_Name»
«Address_Line_1»
«Address_Line_2»
«Address_Line_3»
«Address_Line_4»
«CityCounty»
«Country»

11 May 2007

Re: Proposed New Waste Water Treatment Plant for the Cork Lower Harbour Area

Dear Sirs,

Mott MacDonald Pettit has been commissioned by Cork County Council to prepare an Environmental Impact Assessment for the proposed new Waste Water Treatment Plant (WWTP) for the Cork Lower Harbour area. The Cork Lower Harbour Main Drainage Scheme also involves upgrading the associated collection system.

As part of the preparation of the Environmental Impact Assessment process, we are engaging in a consultation process with relevant statutory bodies and interested parties. We therefore would appreciate if you could submit any relevant information you have on the receiving environment for the proposed development (e.g. previous studies or investigations). In this regard, taking into consideration the project deadlines we would be grateful if you could respond to us before Thursday 31st May. All correspondence should be addressed to the undersigned.

To assist you with this process and enable you to appreciate what is proposed please find herewith:-

- Figure 1.0 showing the proposed development, including the associated collection system

The proposed WWTP will cater for the current and future requirements in the Cork lower harbour area and will have a capacity of approximately 80,000 PE (Population Equivalent). The effluent will be treated to the standards required under the Urban Wastewater Directive and corresponding National legislation and will discharge through an existing outfall into the Lower Harbour. Population centres within the Cork Lower Harbour Drainage Scheme include Carrigaline, Ringaskiddy, Shanbally, Coolmore, Cobh, Monkstown/Passage West and Crosshaven.

In the event that you have no information concerning this development, we would appreciate your confirmation of same.

Thank you in advance for your time and co-operation.

Yours faithfully,
For and on behalf of Mott MacDonald Pettit

Orla Freyne

Encl.

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LEGEND:
 PROPOSED MAJOR PUMP STATION
 PROPOSED MINOR PUMP STATION
 PROPOSED PIPES ALONG ROADS
 PROPOSED PIPES THROUGH FIELDS
 PROPOSED FORESHORE PIPES

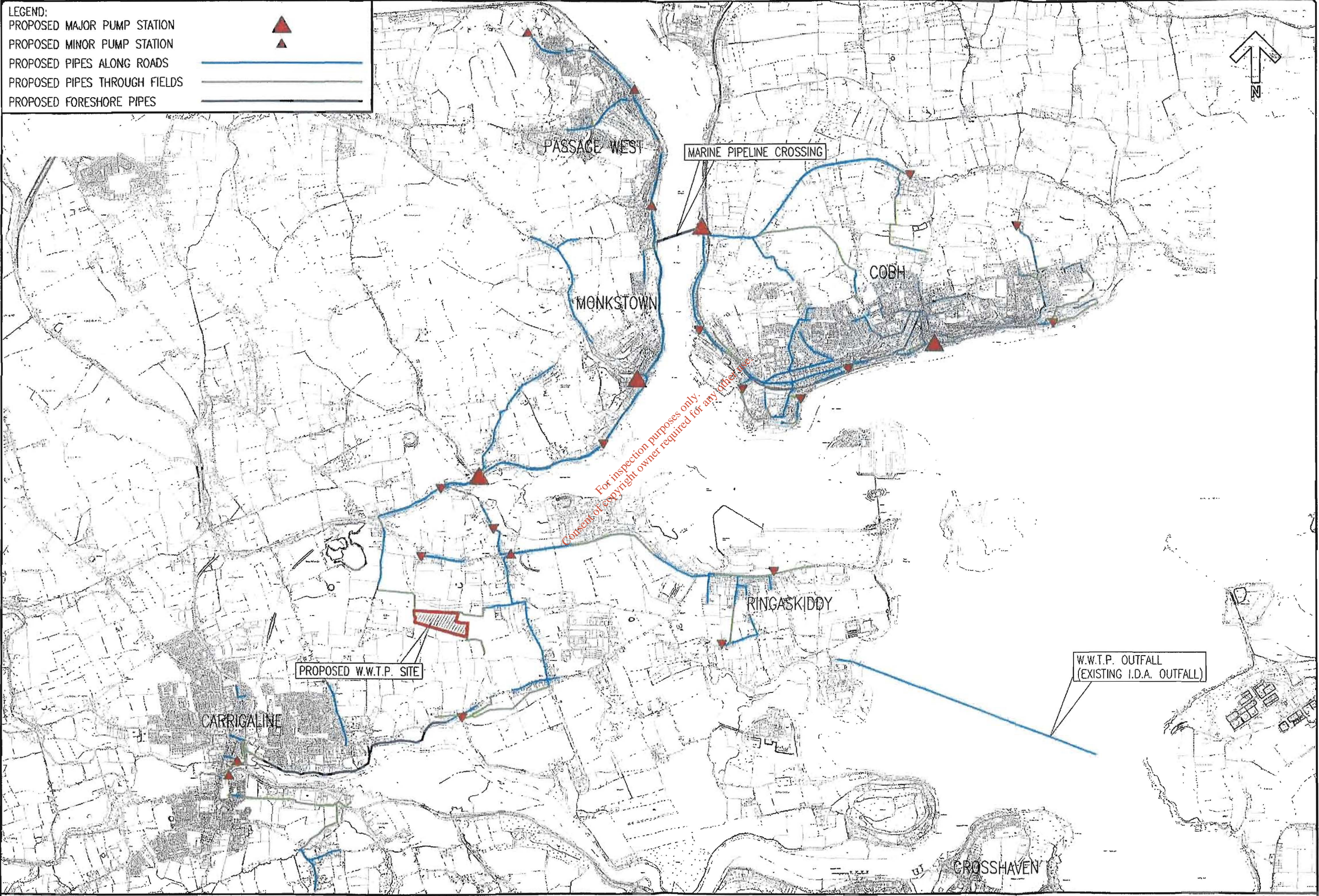
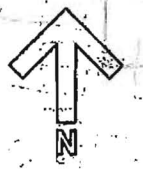
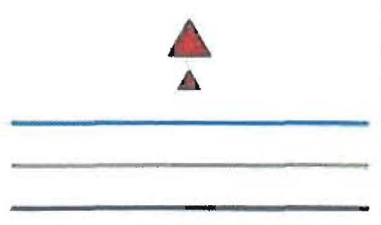



FIGURE 1.0 – PROPOSED DEVELOPMENT & COLLECTION SYSTEM



The Manager
Badger Watch Ireland
5 Tyrone Avenue
Lismore Lawn
Waterford.

The Manager
Bat Conservation Ireland
Ulex House
Drumheel
Lisduff
Virginia
Co. Cavan.

The Manager
Birdwatch Ireland
1 Springmount
NewtownMountKennedy
Co. Wicklow

The Manager
Enviroment Department
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Cork.

The Manager
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Crofton Road
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Co. Dublin

The Manager
Botany Department
Botanical Society of the British Isles
The Natural History Museum
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The Manager
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Rushbrooke
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Carrigagulla
Ballinagree
Macroon
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The Manager
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Glenbrook
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The Manager
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Iarnrod Éireann
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Dublin 8

Mr. Brian Prendergast
Chairperson
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The Manager
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Dun Laoghaire
Co. Dublin.

Mr Simon Berrow
Irish Whale and Dolphin Group
Merchant's Quay
Kilrush
Co. Clare

The Manager
Irish Wildlife Trust
Sigmund Business Centre
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Dublin Industrial Estate
Glasnevin
Dublin 11

The Manager
Head Office
Marine Institute Headquarters
Renville
Oranmore
Co. Galway

The Manager
Environment Department
Port of Cork Company
Custom House Street
Cork

The Manager
Radiological Protection Institute of
Ireland
3 Clonskeagh Square
Clonskeagh Road
Dublin 14

The Manager
South West Regional Authority
Innishmore
Ballincollig
Cork

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**Request to the Statutory
Consultees for a written opinion
on the information to be
contained in an Environmental
Impact Statement (EIS)**

May 2007

Mott MacDonald Pettit
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Tel: 35321 4809800

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Issue and Revision Record

Date	Originator	Checker	Approver	Description
11/05/07	O. Freyne	B. Sharkey	P. Kelly	Initial Issue

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1 Contact Details

The development is being proposed by Cork County Council whose contact details are as follows:

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Telephone Number: 021 4276891

Fax Number: 021 4276321

Email: Robert.Ofarrell@CorkCoCo.ie

This submission has been prepared by Mott MacDonald Pettit on behalf of Cork County Council. Contact details for Mott MacDonald Pettit are as follows:

Contact: Orla Freyne

Address: Mott MacDonald Pettit, 5 Eastgate Avenue, Little Island, Cork

Telephone Number: 021 4809800

Fax Number: 021 4809801

Email: orla.freyne@mottmacpettit.ie

2 Introduction

2.1 Introduction and Location of Development

Mott MacDonald Pettit has been appointed, on behalf of Cork County Council, to carry out an Environmental Impact Assessment (EIA) of the proposed Waste Water Treatment Plant (WWTP) at Cork Lower Harbour. A single WWTP is proposed at a site located to the east of Carrigaline near Shanbally. The proposed Waste Water Treatment Plant will be located in the Ringaskiddy Peninsula approximately 500m south west of Shanbally village, 1.5km east of Carrigaline town and 14km south of Cork City. The location of the proposed new WWTP, associated collection system and existing outfall are provided on Figure 1.

Mott MacDonald Pettit has prepared this document on behalf of Cork County Council, as a request to the Statutory Consultees, for a written submission on the information to be contained in the Environmental Impact Statement (EIS), which will be produced as a result of the EIA process. Taking into consideration the project deadlines we would be grateful if you could respond to us before **Thursday 31st May**.

2.2 Information to be contained in the Environmental Impact Statement

Guidance in the form of published documents from the Government and the Environmental Protection Agency regarding the information to be contained in an environmental impact statement can be grouped into two sectors, legislative guidance and advice notes.

2.2.1 Legislative Guidance

Environmental Impact Assessment requirements derive from European Communities Directive 85/337/EEC (as amended by Directive 97/11/EC). The *European Communities (Environmental Impact Assessment) Regulation 1989 to 1999* gives effect to the European Directives 85/337/EEC and 97/11/EC. The Second Schedule of the *European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1999* specifies the information to be contained in an Environmental Impact Statement.

Under Section 72 of the *Environmental Protection Agency Act, 1992*, the Environmental Protection Agency (EPA) may, or shall under Government Ministerial direction, prepare guidelines on the information to be contained in environmental impact statements. To this extent the EPA published the document *Guidelines on the Information to Contained in*

Environmental Impact Statements, in March 2002. The Act further provides that those preparing Environmental Impact Statements shall have regard to such guidelines.

2.2.2 Advice Notes

In November 2003 the EPA published *Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)* to accompany the aforementioned guidelines. This provides greater detail on the topics related to the different classes of development.

2.2.3 General Format and Layout

The general format and layout of an environmental impact statement is detailed in the EPA document *Guidelines on the Information to be Contained in Environmental Impact Statements* (March 2002) and the Second Schedule of the *European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1999*.

The EIS will follow the 'Grouped Format Structure' as outlined in the EPA guidelines (2002). The EIS will be divided into four main sections:

- Introduction
- Description of the Development
- Receiving Environment, Impacts and Mitigation Measures; and
- Interaction of the Foregoing

2.2.4 Project Description

The EPA guidelines and the Regulations, 1999 specify that the proposed development should be described including information on the site, design and size. This is amplified to include the physical characteristics of the whole development and the land-use requirements during the construction and operational phases.

It is also specified that the project description should include the main characteristics of the process of the proposed development activity. This should include an estimate, by type and quantity, of expected residues and emissions (including water, air and soil pollution, noise and vibration, light, heat, and radiation) resulting from the operation of the proposed development.

The Environmental Protection Agency Advice Notes (2003) suggest that safety and hazard control, power, water and chemical inputs, maintenance, manning and management capacity,

pest and odour control, perimeter security and transportation of sludge should also be assessed. Decommissioning of the waste water treatment plant (if applicable) and projected growth should also be assessed as should any secondary developments associated with the proposed development.

3 Description of the Proposed Development

3.1 Introduction

The Cork Lower Harbour Main Drainage Scheme involves upgrading the existing sewerage system of Cork Lower Harbour and environs together with the provision of a secondary wastewater treatment plant (WWTP). The proposed development also involves upgrading the associated collection system. This upgrade will meet the future needs of Cork Lower Harbour catchment area up to the year 2030.

Wastewater treatment plants with a capacity greater than 10,000 population equivalent and sludge deposition sites where the expected annual deposition is 5,000 tonnes of sludge (wet) require an EIS. The proposed wastewater treatment plant near Shanbally will have a capacity of approximately 80,000 population equivalent (PE) and will generate more than 5,000 tonnes of sludge (wet) per annum. Therefore the development is of a class which requires an EIS. Cork County Council has commissioned the preparation of an Environmental Impact Statement in order to assess the environmental impact of the proposed development.

3.2 Description of Development

The proposed development consists principally of the construction of a large sized urban wastewater treatment plant to serve the population centres of Cork Lower Harbour and its environs. The proposed wastewater treatment plant is an essential element of the Cork Lower Harbour Main Drainage Scheme. Associated works, which will be carried out as part of the proposed development, include:

- The widening of sections of the minor road to the west of the site
- The widening and upgrading of the site access road
- Marine crossing
- New wastewater pumping stations
- The laying of rising mains, surface water sewers and gravity wastewater sewers to direct the wastewater to the new treatment plant
- New wastewater treatment plant

The WWTP and the associated pumping stations, gravity sewers and rising mains are intended to serve existing and future populations in accordance with current development and strategic plans.

The optimum means of procuring the WWTP and collection system would be by means of a Design and Build contract with an operating contract for 20 years. Therefore the specific details regarding the design of the development will not be available at the EIA stage; however a preliminary design of a considered wastewater treatment option for the purpose of determining typical plant footprints and site area requirements has been prepared to allow an environmental assessment of this option to be carried out. This is detailed on the attached Figure 2.0.

The wastewater will receive preliminary treatment including screening and grit/grease removal. Primary settlement of the wastewater will be used to reduce the loading to the secondary biological stage removing the maximum amount of polluting matter. Secondary treatment will involve the biological degradation of the organic content of the wastewater. In addition, the plant will provide for the handling, treatment and disposal of sludges from the site.

3.2.1 Construction Phase

The construction phase of the proposed development may be relatively extensive over the Cork Lower Harbour catchment area and will include site investigations/surveys at various locations (incl. the proposed location of the WWTP and collection system) in addition to those identified in Section 3.2.

The construction phase for the WWTP is expected to extend over a two-year period. However, the timing for the commissioning of the WWTP will depend upon the completion of other associated works, such as construction of the pumping stations, drainage network, etc. A construction management plan will be drawn up detailing the allowable working day, construction traffic and parking arrangements and incorporating environmental protection measures.

It is expected that the wastewater treatment plant will be put into operation immediately on completion of construction of the plant and other wastewater conveyance systems. However, the full capacity of the plant may not be utilised for some years as the design capacity is to the year 2030.

3.2.2 Operational Phase

The wastewater treatment plant will be operational 24 hr/day, 365 day/year. Once the proposed scheme has been constructed the principal activities will consist of the following:

- Operation and maintenance of the waste water collection system, including various pumping stations
- Operation of the approx. 80,000 PE WWTP
- Discharge of treated municipal waste water through the existing outfall to the Lower Harbour
- Removal of waste sludge (after thickening and dewatering)
- Occasional overflows from the waste water discharges from the pumping stations and WWTP storm overflows

The proposed development includes for the transportation of sludge off-site and the reuse at sites yet to be identified. It is generally expected that the sludge will be recycled to agricultural lands. However, it is possible that the sludge may be used in energy recovery systems or other reusable applications.

3.3 Possible Effects on the Environment

3.3.1 Human Beings

The population equivalent of the Cork Lower Harbour area (catchment, as serviced by the WWTP) is approximately 34,000 (2006), and does not have an adequate waste water collection system or any treatment infrastructure to service this population or any expansion of the catchment. The proposed WWTP site is located to the west of Ringaskiddy (c. 2.5km) and northeast of the satellite town of Carrigaline (c. 1.5km). The crossroads settlement of Shanbally is located approximately 500meters to the northeast. Currently the nearest dwelling to the site is approximately 250 meters, however, permission has been sought for a development of 145 no. dwellings closer to the eastern boundary (c. 140 metres). This application is still current.

Raw sewage currently discharging from numerous outfalls in the Lower Harbour area will receive secondary biological treatment at the proposed WWTP prior to discharge. This will be beneficial in terms of public health. Tourism is well developed in the region and a variety of recreational activities take place in the Lower Harbour area including boating, recreational and commercial fishing, sightseeing, golf, walking, water contact activities, horse riding and field sports. As the proposed development will facilitate the improvement of water quality in

the Cork Harbour, this will ultimately facilitate the sustainable development of the tourism industry in the area. The provision of the scheme is likely to promote economic activity in the Lower Harbour area and have a positive impact on the economy. The proposed new route for the upgraded N28 from Cork to Ringaskiddy which will run directly north of the site will provide a buffer between the site and industrial lands to the north.

The information to date suggests that possible effects on this aspect of the environment are as follows:

- There will be a potential for noise, dust and traffic nuisance during the construction phase of the project
- The development will provide the waste water collection and treatment infrastructure necessary for the expansion of the Cork Lower Harbour area, with associated impacts on all aspects of the development of the area including land use, commercial and industrial activity, tourism and recreation and residential growth
- There will be the potential for noise, odour, insect and animal nuisance local to the proposed pumping stations and waste water treatment plant during the operational phase of the project
- There will be increased traffic movements during the construction and operation phases. Construction traffic will result from truck movements associated with the delivery of material, the disposal of excavated material and employees travelling to work. These movements will need to be managed in the interest of traffic safety and to minimise disruption locally. Operational traffic is anticipated to be low. Truck movements will comprise daily movement of sludge vehicles and delivery vehicles.
- There will be a health and safety risk associated with access on to the proposed development site, during the construction and operation phases of the project

3.3.2 Flora & Fauna

The receiving environment proposed for the treated effluent discharge is the Lower Harbour (described in section 3.3.4). Parts of Cork Harbour are designated as special protection areas (SPA site 004030) for bird species under the EU Birds Directive comprising most of the main intertidal areas of Cork Harbour, including all of the North Channel, the Douglas Estuary, inner Lough Mahon, Lough Beg, Whitegate Bay and the Rostellan inlet. The proposed WWTP and existing outfall are not located within these designated areas. There are no designated areas at the WWTP site, the nearest protected area being the proposed Natural Heritage Area (pNHA) situated 0.75km north of the site at Monkstown Creek.

The WWTP site is a Greenfield site consisting primarily of two habitats (improved grassland and hedgerows). Both of these habitats are common in Ireland and the likely value of these habitats in terms of scientific and conservation status is low. Few bird species are expected to be associated with the open improved grasslands at this site. It is likely that a low number of mammal species may use the site. There appear to be no potential roosts on the proposed WWTP site for bats.

The information available to date suggests that possible effects on this aspect of the environment are as follows:

- The proposed new wastewater treatment system will improve the quality of the current untreated discharge to the Cork Lower Harbour, as the treatment plant and collection system will operate within capacity and effluent will receive secondary treatment (biological)
- There may be a loss of some habitats on the 7.35ha site where the proposed new WWTP and potentially the collection system
- There will be an increased volume of discharge to the existing outfall from the WWTP which will have to be considered in the context of the receiving water body. A hydrodynamic model will be commissioned as part of this assessment.

3.3.3 Soils, Geology and Hydrogeology

The character of the WWTP site is largely defined by the gently rolling hill topography of the area. The site is located on a south facing slope which is primarily underlain by Carboniferous Waulsortian Limestone. The area is within a known karstic limestone region and there are possible karst features present in the locality. The proposed site appears well drained, no springs or areas of standing water are evident. Aquifers are likely to be of regional importance with variable vulnerability. An open quarry to the north east of the site suggests groundwater is likely only to be encountered at depth. Suitable excavated material is expected to be re-used on site and the surplus relocated or removed by a licensed contractor.

The information available to date does not suggest any significant possible effects on this aspect of the environment, however the environmental impact associated with the loss of bedrock and/or subsoils will be determined during the EIA process. The footprint of the collection system will also be addressed in the assessment.

3.3.4 Water

Cork harbour is the largest estuary in the country and one of the most important and attractive harbours in Ireland. The harbour area sustains a variety of industrial, commercial and recreational uses. It consists of the upper harbour (outer Lee Estuary and Lough Mahon) and the lower harbour which are connected by an east west channel, with the majority of the tidal exchange occurring in the larger west channel. The water of the lower harbour is well mixed and have salinities characteristic of coastal marine waters. Currently large volumes of untreated municipal wastewater are discharged from Cobh, Passage West, Monkstown, Ringaskiddy and Crosshaven at numerous outfall locations around the harbour. The quality of water in Cork Harbour is monitored by the EPA. Recent reports indicate that Lough Mahon (inner harbour) is classified as eutrophic while both the Lee estuary and Cork Harbour are classified as intermediate. The upper harbour (including from the salmon weir (downstream of waterworks intake) to Monkstown (excluding North Channel at Great Island)) is designated as a sensitive area. The waters that the existing outfall discharges to and which the proposed plant will use are not designated 'sensitive'. Accordingly, nutrient removal is not necessary however, provisions to retro-fit such facilities can be made, should they be required anytime in the future. There are no designated bathing waters within the confines of the Cork Harbour. Fountainstown beach, located outside the mouth of the harbour, approximately 5km from the proposed outfall is the closest designated bathing water. There are a number of active licensed and unlicensed shellfish beds in the lower and upper harbour areas however there are no areas designated in Cork Harbour under the quality of Shellfish water Regulations 1994.

The proposed WWTP will eliminate significant raw water discharges at numerous outfall locations around the harbour. It is expected that there will be a significant improvement in the water quality of the harbour area

The information available to date suggests that possible negative effects on this aspect of the environment are as follows:

- There will be a risk of reduced water quality (surface and groundwater) during the site investigations and subsequent construction of the WWTP & collection system;
- Increased volumes of treated effluent discharged at the existing outfall present a risk to the receiving environment however, the quality of the effluent will be much improved

3.3.5 Noise/ Air and Climate

As with the majority of construction projects, the potential exists for air quality, noise and vibration impacts arising from the construction of the proposed WWTP and collection system. Activities such as soil movement and heavy plant operation are common sources of such impacts. The design of the proposed treatment works will incorporate facilities to contain and treat air/odour emissions from the site, including the enclosure within buildings of processes likely to give rise to odours and the provision of high efficiency odour control units.

The information available to date suggests that possible effects on this aspect of the environment are as follows:

- There will be potential for noise, vibration, odour and dust nuisance during the construction phase of the project
- There will be potential for noise and odour nuisance local to the proposed pumping stations and waste water treatment plant during the operation phase.

It is anticipated that significant impacts, if any, will be limited to the construction phase and with appropriate design and mitigation where required, there should be no significant impacts during the operation of the proposed development. Odour will be taken into consideration with appropriate design/mitigation measures recommended such that no odour impact of significance will be experienced by the nearest sensitive receptors.

3.3.6 Landscape

Developments such as the proposed have the potential to intrude on the prevailing landscape in the locality. Such intrusions can result from the construction of significant structures which can impact on existing views in the locality, site lighting and alterations to existing vegetation on site. The information available to date suggests that possible effects on this aspect of the environment include the proposed WWTP and major pump stations which could have a negative impact on the local landscape. The environmental impact process will evaluate such impacts and specify mitigation measures as appropriate.

3.3.7 Material Assets

The site is bounded to the north and south by high voltage power lines and a Bord Gais substation is located to the south west corner. An ESB substation is also located west of the site. The proposed route of the upgraded N28 from Cork to Ringaskiddy runs to the north of the site. Currently the nearest dwelling is located approximately 250m to the east however

permission has been sought for a development of 145 no. dwellings on lands closer to the eastern boundary (approximately 140m from the site boundary).

The information available to date suggests that possible effects upon this aspect of the environment are as follows:






- The provision of the proposed new WWTP and collection system will be a material asset to the Cork Lower Harbour
- There will be a reduced pollution risk due to the provision of a suitable municipal waste collection and treatment system
- There will be potential for noise, odour, insect and animal nuisance local to the proposed pumping stations and waste water treatment plant. The potential nuisance could affect a number of local material assets, including residential homes.

3.3.8 Cultural Heritage

Current information suggests there are a number of archaeological sites located in the region however no archaeological sites appear to be situated within the proposed development site. A cultural heritage assessment of both the proposed WWTP site and collection system will be undertaken as part of the EIS process to identify any protected structures in the vicinity of the proposed works and ensure if present these structures will not be impacted on during the construction phase. As with any site, it is possible that artefacts of interest may be unearthed during the construction works where the loss of these would be a significant impact.

4 Applicability of IPPC or waste licenses

The proposed development (i.e. upgrade of existing collection system, WWTP and outfall) does not require an IPPC licence or a waste licence.

- LEGEND:
- PROPOSED MAJOR PUMP STATION 
 - PROPOSED MINOR PUMP STATION 
 - PROPOSED PIPES ALONG ROADS 
 - PROPOSED PIPES THROUGH FIELDS 
 - PROPOSED FORESHORE PIPES 

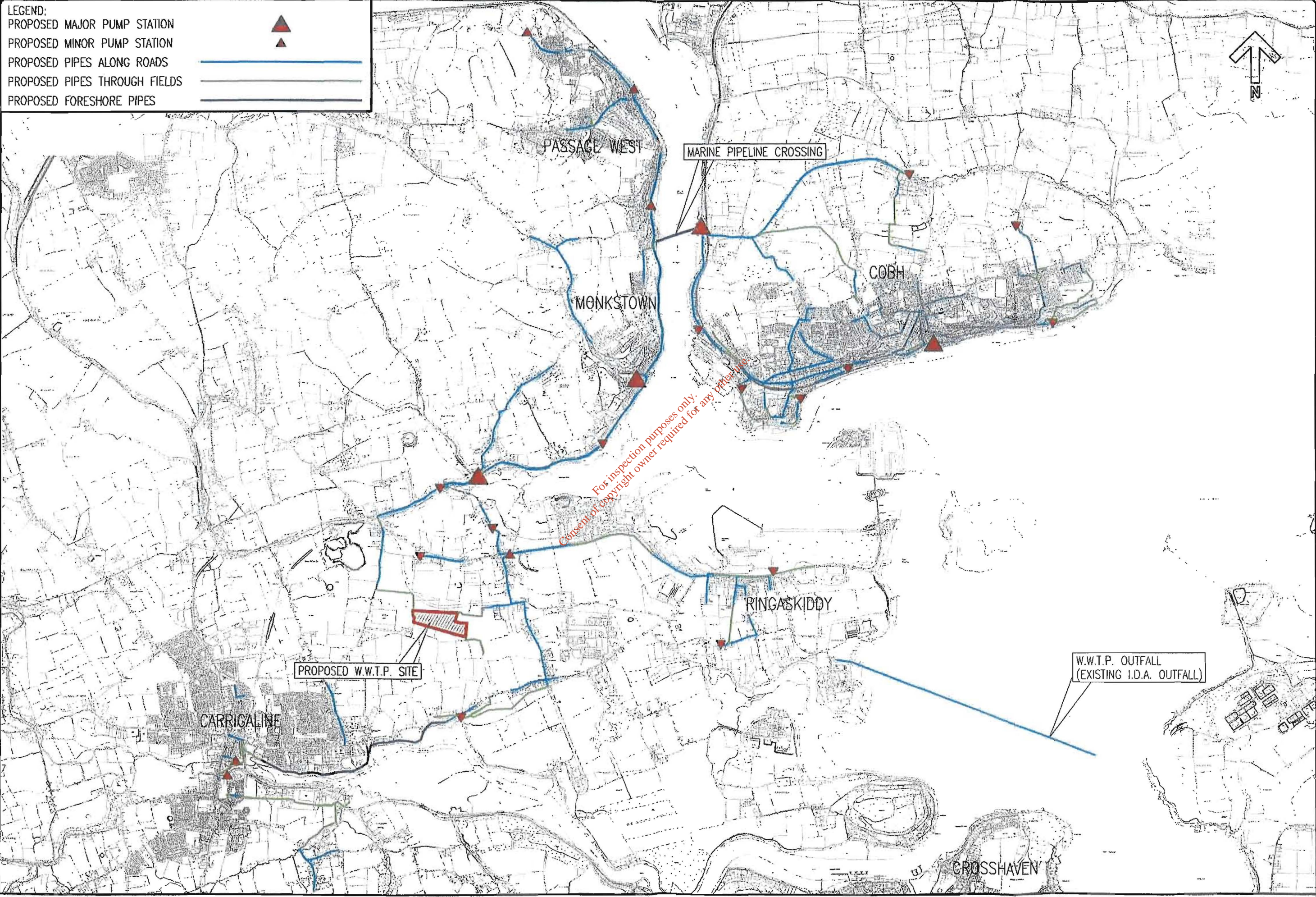
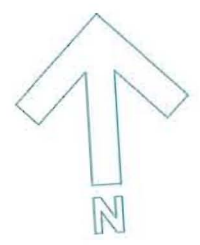
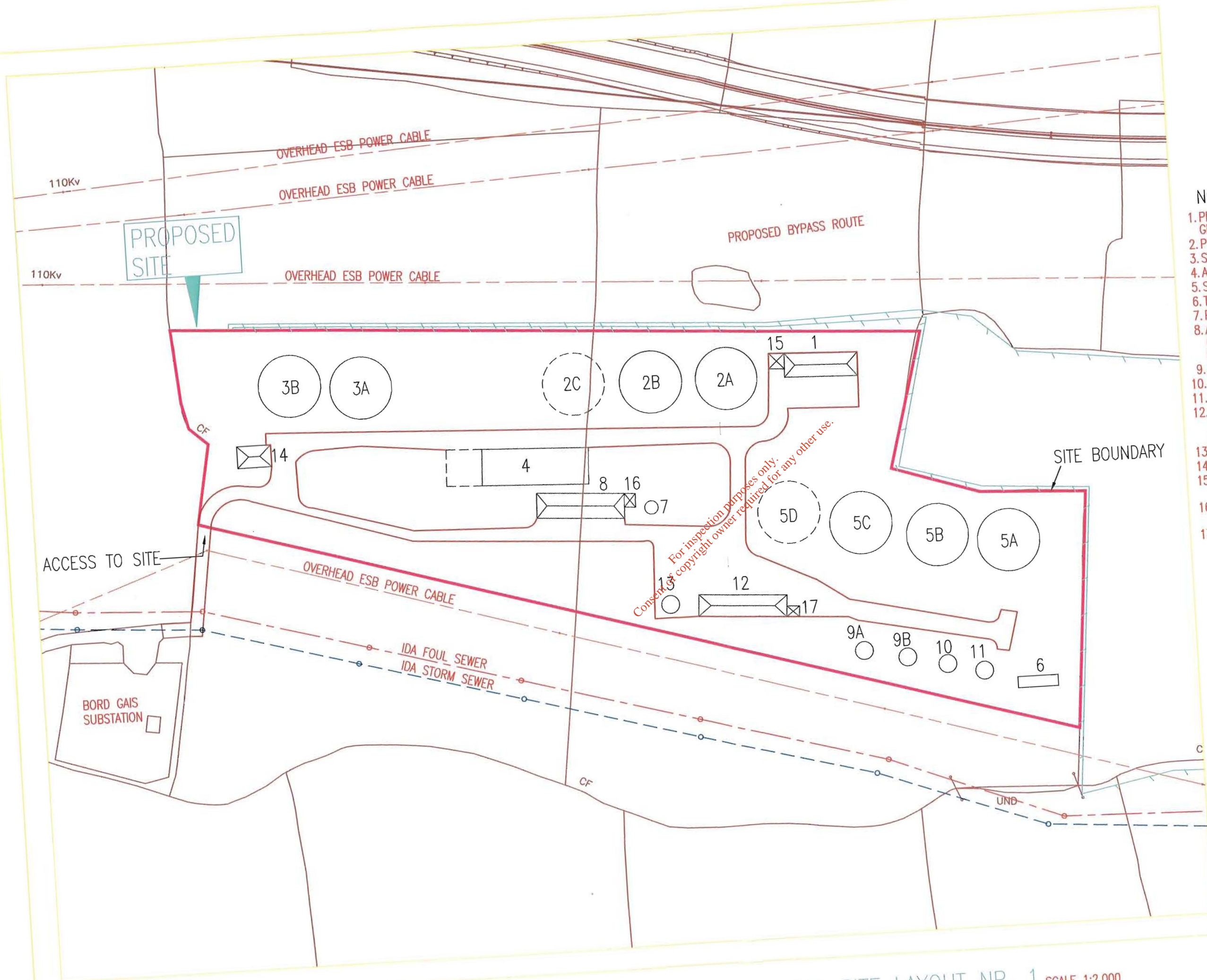


FIGURE 1.0 – PROPOSED DEVELOPMENT & COLLECTION SYSTEM



NOTES

1. PRELIMINARY TREATMENT (SCREENING, GRIT REMOVAL & PRE-AERATION)
2. PRIMARY SETTLEMENT TANKS
3. STORMWATER SETTLEMENT TANKS
4. AERATION TANKS
5. SECONDARY SETTLEMENT TANKS
6. TREATED EFFLUENT MONITORING CHAMBER
7. PRIMARY SLUDGE THICKENER TANK
8. ACTIVATED SLUDGE BUILDING (CONTAINING WASTE ACTIVATED SLUDGE BELT THICKENER)
9. ANEROBIC SLUDGE DIGESTERS
10. DIGESTED SLUDGE STORAGE TANK
11. BIOGAS HOLDER
12. SLUDGE TREATMENT BUILDING (HOUSING THE DIGESTED SLUDGE DEWATERING SYSTEM AND THE SLUDGE DRYING PLANT)
13. DRIED SLUDGE STORAGE SILO
14. ADMINISTRATION / CONTROL BUILDING
15. PRELIMINARY TREATMENT ODOUR CONTROL UNIT
16. PRIMARY SLUDGE ODOUR CONTROL TREATMENT UNIT
17. SECONDARY SLUDGE ODOUR TREATMENT UNIT

LEGEND

- PROPOSED SITE
- RISING MAIN
- FOUL SEWER
- STORM SEWER
- PROPOSED BYPASS
- ESB CABLE
- INDICATES SPACE AVAILABLE FOR FUTURE EXPANSION

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FIGURE 2.0 - INDICATIVE W.W.T.P. SITE LAYOUT NR. 1 SCALE 1:2,000

EXTRACT FROM O.S. MAPS CORK 6471-D & 6510-B
 E.I.S. SURVEY - PROPOSED W.W.T.P. SITE
 CORK HARBOUR MAIN DRAINAGE SCHEME
 JOB NR. A5670
 DRG NR. 5670FG94

Request to An Bord Pleanála for a written opinion on the information to be contained in an Environmental Impact Statement

May 2007

Mott MacDonald Pettit
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Issue and Revision Record

	Date	Originator	Checker	Approver	Description
	11/05/07	O. Freyne	B. Sharkey	P. Kelly	Initial Issue

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1 Contact Details

The development is being proposed by Cork County Council whose contact details are as follows:

Contact: Robert O Farrell, Senior Engineer

Address: Cork County Council, County Hall, Cork.

Telephone Number: 021 4276891

Fax Number: 021 4276321

Email: Robert.Ofarrell@CorkCoCo.ie

This submission has been prepared by Mott MacDonald Pettit on behalf of Cork County Council. Contact details for Mott MacDonald Pettit are as follows:

Contact: Orla Freyne

Address: Mott MacDonald Pettit, 5 Eastgate Avenue, Little Island, Cork

Telephone Number: 021 4809800

Fax Number: 021 4809801

Email: orla.freyne@mottmacpettit.ie

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2 Introduction

2.1 Introduction and Location of Development

Mott MacDonald Pettit has been appointed, on behalf of Cork County Council, to carry out an Environmental Impact Assessment (EIA) of the proposed Waste Water Treatment Plant (WWTP) at Cork Lower Harbour. A single WWTP is proposed at a site located to the east of Carrigaline near Shanbally. The proposed Waste Water Treatment Plant will be located in the Ringaskiddy Peninsula approximately 500m south west of Shanbally village, 1.5km east of Carrigaline town and 14km south of Cork City. The location of the proposed new WWTP, associated collection system and existing outfall are provided on Figure 1.

Mott MacDonald Pettit has prepared this document on behalf of Cork County Council, as a request to An Bord Pleanála, for a written submission on the information to be contained in the Environmental Impact Statement (EIS), which will be produced as a result of the EIA process. Taking into consideration the project deadlines we would be grateful if you could respond to us before *Thursday 31st May*.

2.2 Information to be contained in the Environmental Impact Statement

Guidance in the form of published documents from the Government and the Environmental Protection Agency regarding the information to be contained in an environmental impact statement can be grouped into two sectors, legislative guidance and advice notes.

2.2.1 Legislative Guidance

Environmental Impact Assessment requirements derive from European Communities Directive 85/337/EEC (as amended by Directive 97/11/EC). The *European Communities (Environmental Impact Assessment) Regulation 1989 to 1999* gives effect to the European Directives 85/337/EEC and 97/11/EC. The Second Schedule of the *European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1999* specifies the information to be contained in an Environmental Impact Statement.

Under Section 72 of the *Environmental Protection Agency Act, 1992*, the Environmental Protection Agency (EPA) may, or shall under Government Ministerial direction, prepare guidelines on the information to be contained in environmental impact statements. To this

extent the EPA published the document *Guidelines on the Information to be Contained in Environmental Impact Statements*, in March 2002. The Act further provides that those preparing Environmental Impact Statements shall have regard to such guidelines.

2.2.2 Advice Notes

In November 2003 the EPA published *Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)* to accompany the aforementioned guidelines. This provides greater detail on the topics related to the different classes of development.

2.2.3 General Format and Layout

The general format and layout of an environmental impact statement is detailed in the EPA document *Guidelines on the Information to be Contained in Environmental Impact Statements* (March 2002) and the Second Schedule of the *European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1999*.

The EIS will follow the 'Grouped Format Structure' as outlined in the EPA guidelines (2002). The EIS will be divided into four main sections:

- Introduction
- Description of the Development
- Receiving Environment, Impacts and Mitigation Measures; and
- Interaction of the Foregoing

2.2.4 Project Description

The EPA guidelines and the Regulations, 1999 specify that the proposed development should be described including information on the site, design and size. This is amplified to include the physical characteristics of the whole development and the land-use requirements during the construction and operational phases.

It is also specified that the project description should include the main characteristics of the process of the proposed development activity. This should include an estimate, by type and quantity, of expected residues and emissions (including water, air and soil pollution, noise and vibration, light, heat, and radiation) resulting from the operation of the proposed development.

The Environmental Protection Agency Advice Notes (2003) suggest that safety and hazard control, power, water and chemical inputs, maintenance, manning and management capacity, pest and odour control, perimeter security and transportation of sludge should also be assessed. Decommissioning of the waste water treatment plant (if applicable) and projected growth should also be assessed as should any secondary developments associated with the proposed development.

3 Description of the Proposed Development

3.1 Introduction

The Cork Lower Harbour Main Drainage Scheme involves upgrading the existing sewerage system of Cork Lower Harbour and environs together with the provision of a secondary wastewater treatment plant (WWTP). The proposed development also involves upgrading the associated collection system. This upgrade will meet the future needs of Cork Lower Harbour catchment area up to the year 2030.

Wastewater treatment plants with a capacity greater than 10,000 population equivalent and sludge deposition sites where the expected annual deposition is 5,000 tonnes of sludge (wet) require an EIS. The proposed wastewater treatment plant near Shanbally will have a capacity of approximately 80,000 population equivalent (PE) and will generate more than 5,000 tonnes of sludge (wet) per annum. Therefore the development is of a class which requires an EIS. Cork County Council has commissioned the preparation of an Environmental Impact Statement in order to assess the environmental impact of the proposed development.

3.2 Description of Development

The proposed development consists principally of the construction of a large sized urban wastewater treatment plant to serve the population centres of Cork Lower Harbour and its environs. The proposed wastewater treatment plant is an essential element of the Cork Lower Harbour Main Drainage Scheme. Associated works, which will be carried out as part of the proposed development, include:

- The widening of sections of the minor road to the west of the site
- The widening and upgrading of the site access road
- Marine crossing
- New wastewater pumping stations

- The laying of rising mains, surface water sewers and gravity wastewater sewers to direct the wastewater to the new treatment plant
- New wastewater treatment plant

The WWTP and the associated pumping stations, gravity sewers and rising mains are intended to serve existing and future populations in accordance with current development and strategic plans.

The optimum means of procuring the WWTP and collection system would be by means of a Design and Build contract with an operating contract for 20 years. Therefore the specific details regarding the design of the development will not be available at the EIA stage; however a preliminary design of a considered wastewater treatment option for the purpose of determining typical plant footprints and site area requirements has been prepared to allow an environmental assessment of this option to be carried out. This is detailed on the attached Figure 2.0.

The wastewater will receive preliminary treatment including screening and grit/grease removal. Primary settlement of the wastewater will be used to reduce the loading to the secondary biological stage removing the maximum amount of polluting matter. Secondary treatment will involve the biological degradation of the organic content of the wastewater. In addition, the plant will provide for the handling, treatment and disposal of sludges from the site.

3.2.1 Construction Phase

The construction phase of the proposed development may be relatively extensive over the Cork Lower Harbour catchment area and will include site investigations/surveys at various locations (incl. the proposed location of the WWTP and collection system) in addition to those identified in Section 3.2.

The construction phase for the WWTP is expected to extend over a two-year period. However, the timing for the commissioning of the WWTP will depend upon the completion of other associated works, such as construction of the pumping stations, drainage network, etc. A construction management plan will be drawn up detailing the allowable working day, construction traffic and parking arrangements and incorporating environmental protection measures.

It is expected that the wastewater treatment plant will be put into operation immediately on completion of construction of the plant and other wastewater conveyance systems. However, the full capacity of the plant may not be utilised for some years as the design capacity is to the year 2030.

3.2.2 Operational Phase

The wastewater treatment plant will be operational 24 hr/day, 365 day/year. Once the proposed scheme has been constructed the principal activities will consist of the following:

- Operation and maintenance of the waste water collection system, including various pumping stations
- Operation of the approx. 80,000 PE WWTP
- Discharge of treated municipal waste water through the existing outfall to the Lower Harbour
- Removal of waste sludge (after thickening and dewatering)
- Occasional overflows from the waste water discharges from the pumping stations and WWTP storm overflows

The proposed development includes for the transportation of sludge off-site and the reuse at sites yet to be identified. It is generally expected that the sludge will be recycled to agricultural lands. However, it is possible that the sludge may be used in energy recovery systems or other reusable applications.

3.3 Possible Effects on the Environment

3.3.1 Human Beings

The population equivalent of the Cork Lower Harbour area (catchment, as serviced by the WWTP) is approximately 34,000 (2006), and does not have an adequate waste water collection system or any treatment infrastructure to service this population or any expansion of the catchment. The proposed WWTP site is located to the west of Ringaskiddy (c. 2.5km) and northeast of the satellite town of Carrigaline (c. 1.5km). The crossroads settlement of Shanbally is located approximately 500meters to the northeast. Currently the nearest dwelling to the site is approximately 250 meters, however, permission has been sought for a development of 145 no. dwellings closer to the eastern boundary (c. 140 metres). This application is still current.

Raw sewage currently discharging from numerous outfalls in the Lower Harbour area will receive secondary biological treatment at the proposed WWTP prior to discharge. This will be beneficial in terms of public health. Tourism is well developed in the region and a variety of recreational activities take place in the Lower Harbour area including boating, recreational and commercial fishing, sightseeing, golf, walking, water contact activities, horse riding and field sports. As the proposed development will facilitate the improvement of water quality in the Cork Harbour, this will ultimately facilitate the sustainable development of the tourism industry in the area. The provision of the scheme is likely to promote economic activity in the Lower Harbour area and have a positive impact on the economy. The proposed new route for the upgraded N28 from Cork to Ringaskiddy which will run directly north of the site will provide a buffer between the site and industrial lands to the north.

The information to date suggests that possible effects on this aspect of the environment are as follows:

- There will be a potential for noise, dust and traffic nuisance during the construction phase of the project
- The development will provide the waste water collection and treatment infrastructure necessary for the expansion of the Cork Lower Harbour area, with associated impacts on all aspects of the development of the area including land use, commercial and industrial activity, tourism and recreation and residential growth
- There will be the potential for noise, odour, insect and animal nuisance local to the proposed pumping stations and waste water treatment plant during the operational phase of the project
- There will be increased traffic movements during the construction and operation phases. Construction traffic will result from truck movements associated with the delivery of material, the disposal of excavated material and employees travelling to work. These movements will need to be managed in the interest of traffic safety and to minimise disruption locally. Operational traffic is anticipated to be low. Truck movements will comprise daily movement of sludge vehicles and delivery vehicles.
- There will be a health and safety risk associated with access on to the proposed development site, during the construction and operation phases of the project

3.3.2 Flora & Fauna

The receiving environment proposed for the treated effluent discharge is the Lower Harbour (described in section 3.3.4). Parts of Cork Harbour are designated as special protection areas (SPA site 004030) for bird species under the EU Birds Directive comprising most of the main intertidal areas of Cork Harbour, including all of the North Channel, the Douglas

Estuary, inner Lough Mahon, Lough Beg, Whitegate Bay and the Rostellan inlet. The proposed WWTP and existing outfall are not located within these designated areas. There are no designated areas at the WWTP site, the nearest protected area being the proposed Natural Heritage Area (pNHA) situated 0.75km north of the site at Monkstown Creek.

The WWTP site is a Greenfield site consisting primarily of two habitats (improved grassland and hedgerows). Both of these habitats are common in Ireland and the likely value of these habitats in terms of scientific and conservation status is low. Few bird species are expected to be associated with the open improved grasslands at this site. It is likely that a low number of mammal species may use the site. There appear to be no potential roosts on the proposed WWTP site for bats.

The information available to date suggests that possible effects on this aspect of the environment are as follows:

- The proposed new wastewater treatment system will improve the quality of the current untreated discharge to the Cork Lower Harbour, as the treatment plant and collection system will operate within capacity and effluent will receive secondary treatment (biological)
- There may be a loss of some habitats on the 7.35ha site where the proposed new WWTP and potentially the collection system
- There will be an increased volume of discharge to the existing outfall from the WWTP which will have to be considered in the context of the receiving water body. A hydrodynamic model will be commissioned as part of this assessment.

3.3.3 Soils, Geology and Hydrogeology

The character of the WWTP site is largely defined by the gently rolling hill topography of the area. The site is located on a south facing slope which is primarily underlain by Carboniferous Waulsortian Limestone. The area is within a known karstic limestone region and there are possible karst features present in the locality. The proposed site appears well drained, no springs or areas of standing water are evident. Aquifers are likely to be of regional importance with variable vulnerability. An open quarry to the north east of the site suggests groundwater is likely only to be encountered at depth. Suitable excavated material is expected to be re-used on site and the surplus relocated or removed by a licensed contractor.

The information available to date does not suggest any significant possible effects on this aspect of the environment, however the environmental impact associated with the loss of bedrock and/or subsoils will be determined during the EIA process. The footprint of the collection system will also be addressed in the assessment.

3.3.4 Water

Cork harbour is the largest estuary in the country and one of the most important and attractive harbours in Ireland. The harbour area sustains a variety of industrial, commercial and recreational uses. It consists of the upper harbour (outer Lee Estuary and Lough Mahon) and the lower harbour which are connected by an east west channel, with the majority of the tidal exchange occurring in the larger west channel. The water of the lower harbour is well mixed and have salinities characteristic of coastal marine waters. Currently large volumes of untreated municipal wastewater are discharged from Cobh, Passage West, Monkstown, Ringaskiddy and Crosshaven at numerous outfall locations around the harbour. The quality of water in Cork Harbour is monitored by the EPA. Recent reports indicate that Lough Mahon (inner harbour) is classified as eutrophic while both the Lee estuary and Cork Harbour are classified as intermediate. The upper harbour (including from the salmon weir (downstream of waterworks intake) to Monkstown (excluding North Channel at Great Island)) is designated as a sensitive area. The waters that the existing outfall discharges to and which the proposed plant will use are not designated 'sensitive'. Accordingly, nutrient removal is not necessary however, provisions to retro-fit such facilities can be made, should they be required anytime in the future. There are no designated bathing waters within the confines of the Cork Harbour. Fountainstown beach, located outside the mouth of the harbour, approximately 5km from the proposed outfall is the closest designated bathing water. There are a number of active licensed and unlicensed shellfish beds in the lower and upper harbour areas however there are no areas designated in Cork Harbour under the quality of Shellfish water Regulations 1994.

The proposed WWTP will eliminate significant raw water discharges at numerous outfall locations around the harbour. It is expected that there will be a significant improvement in the water quality of the harbour area

The information available to date suggests that possible negative effects on this aspect of the environment are as follows:

- There will be a risk of reduced water quality (surface and groundwater) during the site investigations and subsequent construction of the WWTP & collection system;
- Increased volumes of treated effluent discharged at the existing outfall present a risk to the receiving environment however, the quality of the effluent will be much improved

3.3.5 Noise/ Air and Climate

As with the majority of construction projects, the potential exists for air quality, noise and vibration impacts arising from the construction of the proposed WWTP and collection system. Activities such as soil movement and heavy plant operation are common sources of such impacts. The design of the proposed treatment works will incorporate facilities to contain and treat air/odour emissions from the site, including the enclosure within buildings of processes likely to give rise to odours and the provision of high efficiency odour control units.

The information available to date suggests that possible effects on this aspect of the environment are as follows:

- There will be potential for noise, vibration, odour and dust nuisance during the construction phase of the project.
- There will be potential for noise and odour nuisance local to the proposed pumping stations and waste water treatment plant during the operation phase.

It is anticipated that significant impacts, if any, will be limited to the construction phase and with appropriate design and mitigation where required, there should be no significant impacts during the operation of the proposed development. Odour will be taken into consideration with appropriate design/mitigation measures recommended such that no odour impact of significance will be experienced by the nearest sensitive receptors.

3.3.6 Landscape

Developments such as the proposed have the potential to intrude on the prevailing landscape in the locality. Such intrusions can result from the construction of significant structures which can impact on existing views in the locality, site lighting and alterations to existing vegetation on site. The information available to date suggests that possible effects on this aspect of the environment include the proposed WWTP and major pump stations which could have a negative impact on the local landscape. The environmental impact process will evaluate such impacts and specify mitigation measures as appropriate.

3.3.7 Material Assets

The site is bounded to the north and south by high voltage power lines and a Bord Gais substation is located to the south west corner. An ESB substation is also located west of the site. The proposed route of the upgraded N28 from Cork to Ringaskiddy runs to the north of the site. Currently the nearest dwelling is located approximately 250m to the east however permission has been sought for a development of 145 no. dwellings on lands closer to the eastern boundary (approximately 140m from the site boundary).

The information available to date suggests that possible effects upon this aspect of the environment are as follows:






- The provision of the proposed new WWTP and collection system will be a material asset to the Cork Lower Harbour
- There will be a reduced pollution risk due to the provision of a suitable municipal waste collection and treatment system
- There will be potential for noise, odour, insect and animal nuisance local to the proposed pumping stations and waste water treatment plant. The potential nuisance could affect a number of local material assets, including residential homes.

3.3.8 Cultural Heritage

Current information suggests there are a number of archaeological sites located in the region however no archaeological sites appear to be situated within the proposed development site. A cultural heritage assessment of both the proposed WWTP site and collection system will be undertaken as part of the EIS process to identify any protected structures in the vicinity of the proposed works and ensure if present these structures will not be impacted on during the construction phase. As with any site, it is possible that artefacts of interest may be unearthed during the construction works where the loss of these would be a significant impact.

4 Applicability of IPPC or waste licenses

The proposed development (i.e. upgrade of existing collection system, WWTP and outfall) does not require an IPPC licence or a waste licence.

- LEGEND:
- PROPOSED MAJOR PUMP STATION 
 - PROPOSED MINOR PUMP STATION 
 - PROPOSED PIPES ALONG ROADS 
 - PROPOSED PIPES THROUGH FIELDS 
 - PROPOSED FORESHORE PIPES 

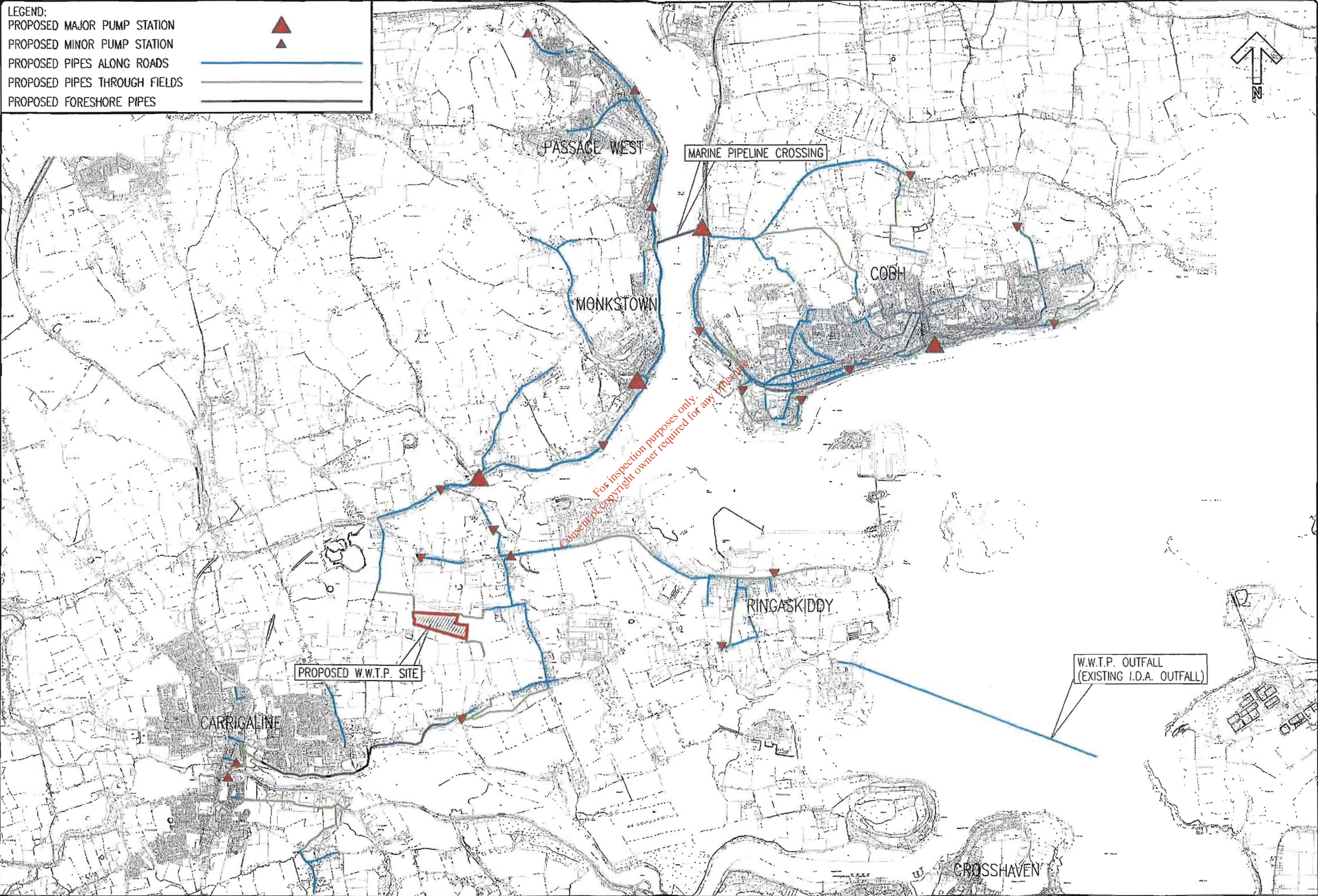
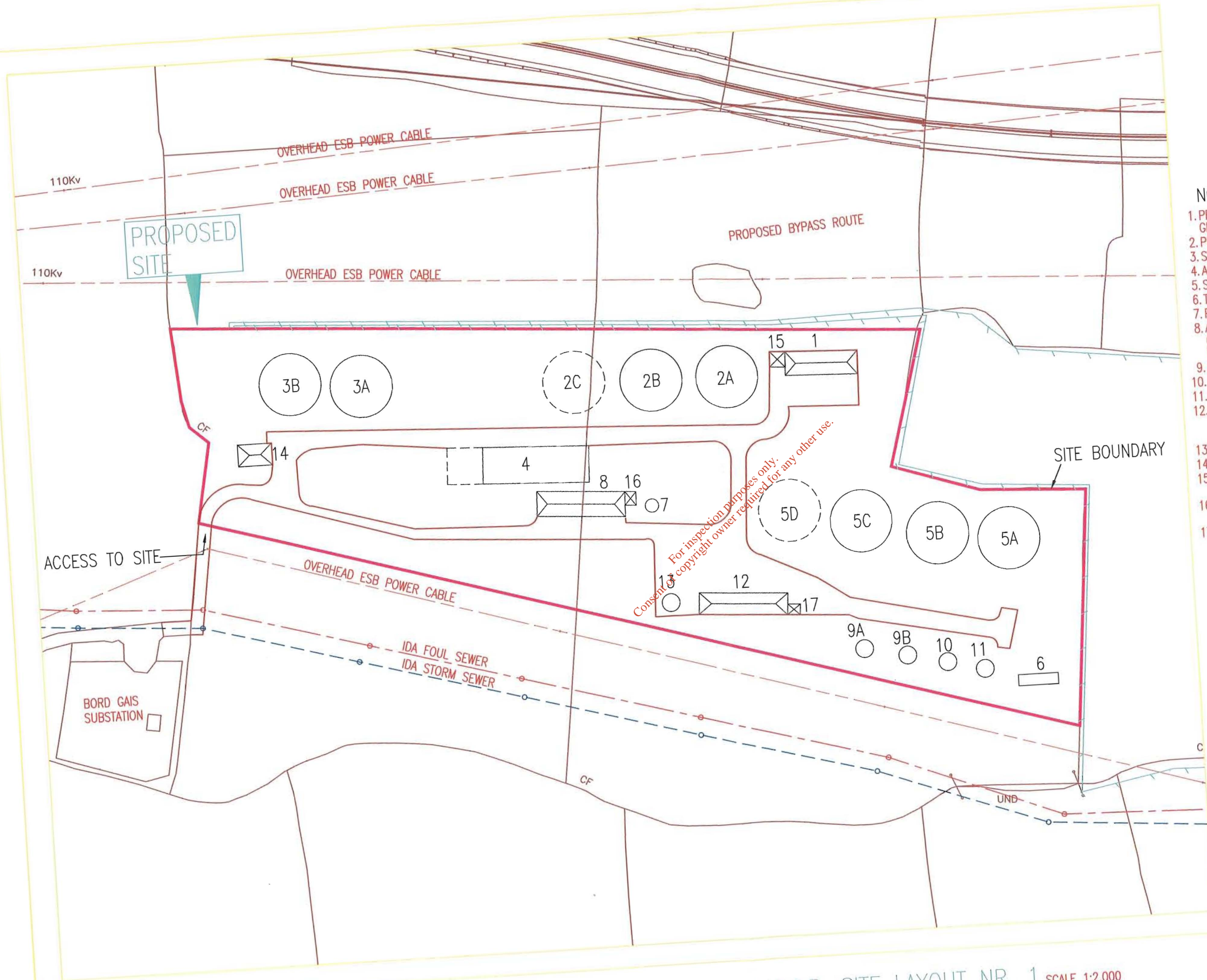
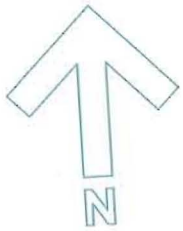


FIGURE 1.0 - PROPOSED DEVELOPMENT & COLLECTION SYSTEM



NOTES

1. PRELIMINARY TREATMENT (SCREENING, GRIT REMOVAL & PRE-AERATION)
2. PRIMARY SETTLEMENT TANKS
3. STORMWATER SETTLEMENT TANKS
4. AERATION TANKS
5. SECONDARY SETTLEMENT TANKS
6. TREATED EFFLUENT MONITORING CHAMBER
7. PRIMARY SLUDGE THICKENER TANK
8. ACTIVATED SLUDGE BUILDING (CONTAINING WASTE ACTIVATED SLUDGE BELT THICKENER)
9. ANEROBIC SLUDGE DIGESTERS
10. DIGESTED SLUDGE STORAGE TANK
11. BIOGAS HOLDER
12. SLUDGE TREATMENT BUILDING (HOUSING THE DIGESTED SLUDGE DEWATERING SYSTEM AND THE SLUDGE DRYING PLANT)
13. DRIED SLUDGE STORAGE SILO
14. ADMINISTRATION / CONTROL BUILDING
15. PRELIMINARY TREATMENT ODOUR CONTROL UNIT
16. PRIMARY SLUDGE ODOUR CONTROL TREATMENT UNIT
17. SECONDARY SLUDGE ODOUR TREATMENT UNIT

LEGEND

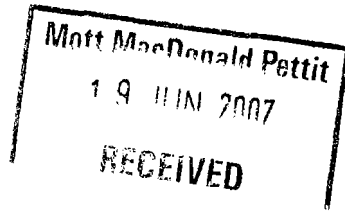
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- RISING MAIN
- FOUL SEWER
- STORM SEWER
- PROPOSED BYPASS
- ESB CABLE
- INDICATES SPACE AVAILABLE FOR FUTURE EXPANSION

EXTRACT FROM O.S. MAPS CORK 6471-D & 6510-B
 E.I.S. SURVEY - PROPOSED W.W.T.P. SITE
 CORK HARBOUR MAIN DRAINAGE SCHEME
 JOB NR. A5670
 DRG NR. 5670G94

FIGURE 2.0 - INDICATIVE W.W.T.P. SITE LAYOUT NR. 1 SCALE 1:2,000

Our Ref: JS 04.JS0002
P.A.Reg.Ref:
Your Ref: Cork County Council

Orla Freyne
Mott MacDonald Pettit
5 Eastgate Avenue,
Eastgate,
Little Island,
Co. Cork.



18th June 2007

Re: Wastewater Treatment Plant, Cork Lower Harbour, County Cork

Dear Sir/Madam,

An Bord Pleanála refers to your request for a written opinion on the information to be contained in an environmental impact statement to be prepared in respect of the above-mentioned proposed development.

In this regard please note that the Board has given notice of your request to the following bodies in accordance with article 95 of the Planning and Development Regulations, 2001.

1. **An Taisce**
2. **The Heritage Council**
3. **Fáilte Éireann**
4. **Health Service Executive**
5. **The National Roads Authority**
6. **The Southern Regional Fisheries Board**
7. **The Department of Communications, Marine & Natural Resources**
8. **Department of Transport & Marine**

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A rectangular stamp with a black border. The text inside reads "PASTO" in a large, bold, sans-serif font, and "DC" in a smaller, bold, sans-serif font to its right.

Please also be advised that, in accordance with the said article 95, the Board hereby invites you to make a submission or observation in relation to the information to be contained in the environmental impact statement within **4 weeks** in the date of this notice.

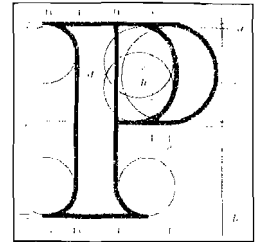
Any submission in response to to this notice should be received not later that **5.30 p.m. on the 16th of July, 2007.**

Yours faithfully,

Nichola Meehan
Executive Officer

es05p.ltr

An Bord Pleanála



64 Sraid Macúilbhríde,
Baile Átha Cliath 1

Tel: (01) 858 8100
LoCall: 1890 275 175
Fax: (01) 872 2684
Web: <http://www.pleanala.ie>
email: cbord@pleanala.ie

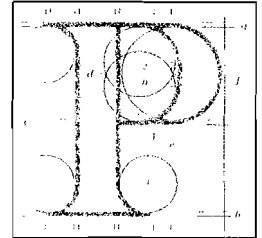
64 Marlborough Street,
Dublin 1.

Our Ref: 04.JS0002
Your Ref: Cork County Council

Orla Freyne
Mott MacDonald Pettit
5 Eastgate Avenue
Eastgate
Little Island
Co. Cork

Mott MacDonald Pettit, Cork					
Job No: 231541		Serial No:			
Return to:		File No:			
Other Ref:					
Received					
14 SEP 2007					
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OF	/			<i>[Signature]</i>	14/9/07
FmCG		/		<i>[Signature]</i>	14/9/07

An Bord Pleanála



13th September, 2007

Re: Wastewater Treatment Plant, Cork Lower Harbour, County Cork.

Dear Madam,

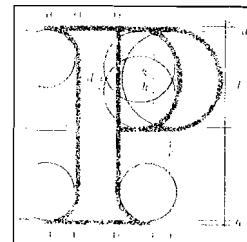
In response to your request please now be advised that the following constitutes the Board's written opinion on the information to be contained in the environmental impact statement to be prepared in respect of the above-mentioned proposed development.

1. The environmental impact statement for the project referred to above shall contain the information specified in paragraph 1 of Schedule 6 of the Planning and Development Regulations 2001 (S.I.no.600 of 2001) and the information specified in paragraph 2 of Schedule 6 to the extent that this is relevant to the approval procedure as set out in Sections 175 and 226 of the Planning and Development Act 2000 as amended, to the nature of the development in question and to the environmental features likely to be affected. A summary in non-technical language of the information contained in the main body of the environmental impact statement shall also be given.
2. The environmental impact statement shall be prepared having regard to the 'Guidelines on the information to be contained in Environmental Impact Statements' published by the Environmental Protection Agency in March 2002 and the relevant part (Section 3, Project Type 30) of 'Advice Notes on Current Practice (in the preparation of Environmental Impact Statements)' published by the Environmental Protection Agency in September 2003.

64 Sraid Maoilbhuide,
Baile Átha Cliath 1.

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email: bord@pleanala.ie

64 Marlborough Street,
Dublin 1



3. The environmental impact statement should in particular contain information and address the following issues:

(a) Need for the scheme:

Outline the implications of a do-nothing scenario including an assessment of current impacts on water quality and ecology from existing untreated and treated effluent discharges.

(b) Alternatives:

The examination of alternatives shall consider both the do-nothing scenario and alternative sites for the wastewater treatment plant. An indication of the main reasons for the developer's choice having regard to environmental effects should be included.

Information on alternative treatment processes considered with particular reference to the relatively large size of the proposed works and the need for reliability together with implications for control strategies and likely differences in performance between treatment processes in relation to odours and other parameters.

Information on alternative locations for final effluent outfall and the relative impacts on dispersion and water quality in the Cork Harbour area. Advantages / disadvantages in using an existing outfall pipe should be identified.

(c) Procurement / Operation Alternatives:

Information on potential alternative procurement methods and operational modalities. The different methods of procurement should be outlined including the advantages / disadvantages in different circumstances and sizes of plant. The choice of operational modality should be indicated, together with the main reasons for the developer's choice having regard to environmental effects.

(d) Context / interactions:

Information on impacts and relationship with other effluent discharges to Cork Harbour. The impacts on and by adjacent discharges whether existing, planned or likely

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64 Marlborough Street,
Dublin 1.

in the near future needs to be cumulatively assessed. The combined and cumulative impact of effluent discharges should be assessed in the context of the Water Framework Directive and the Programme of Measures for the South West River Basin District (SWRBD) which is due to be adopted in 2009.

In general, given the projected timescale for implementation of the provisions of the Water Framework Directive (WFD) and the likely construction programme of the proposed development, the environmental impact statement should indicate how it is proposed to comply with the provisions of the WFD and its applicability to the South West River Basin catchment.

(e) Visual Impact:

Information on and an assessment of the impact of the treatment plant on the landscape. The assessment should have regard to the provisions of the Cork County Development Plan.

(f) Water Quality:

Information on and an assessment of the impact of the discharge on water quality in the vicinity of the discharge point. A baseline study in relation to nutrient levels and of fish species including crustaceans should be carried out.

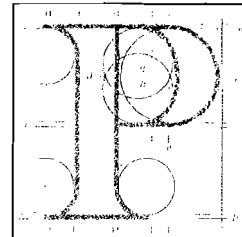
(g) Flora and Fauna:

An assessment of the impact of the discharge on flora and fauna of ecological value should be carried out. In particular the likely impact on any designated sites of ecological significance should be assessed. The impact on priority habitats and protected flora and fauna should be considered.

(h) Human Beings:

Information on the likely effects of the wastewater treatment plant on human beings in the vicinity due to odours, noise and traffic generated. Up to date mapping of all newly constructed houses, roads and industrial premises in the vicinity of the site and information on all planned and approved developments in the vicinity of the site.

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(i) Odours:

Information on odour dispersion patterns and the potential impacts on adjacent residential properties and also on public areas including sportsgrounds. Particular attention should be given to the scale of the development and the level of potential odour generation from the different process operations.

(j) Construction Phase:

Information on the likely effects on human beings, water quality flora and fauna arising from the construction activities.

(k) Cultural Heritage:

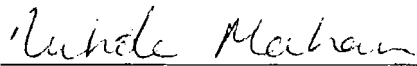
Information on the likely effects on items of archaeological interest arising from construction works relating to the outfall pipeline, in addition to a study of the site of the proposed treatment works.

Enclosed for your information is a submission received from the Department of Communications, Marine and Natural Resources, the NRA and the South Western Fisheries Board. Please be advised that no submissions were received from An Taisce, The Heritage Council, Fáilte Éireann, the Health Service Executive, and the Department of Transport.

If you have any further queries in relation to this matter please contact the undersigned officer of the Board.

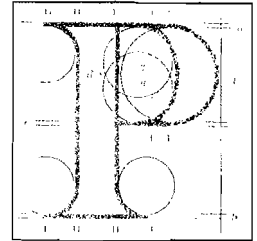
Please quote the above-mentioned An Bord Pleanála reference number in any correspondence or telephone contact with the Board.

Yours faithfully,



Nichola Meehan
Executive Officer

An Bord Pleanála



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64 Marlborough Street,
Dublin 1.



AN BORD PLEANÁLA
TIME _____ BY _____
17 JUL 2007
LTR-DATED _____ FROM _____
PL _____

16 July, 2007

Our Ref: MS51/8/1299

(Please quote on all correspondence)

Your Ref: JS.04.JS0002

Ms Nichola McNamee
An Bord Pleanála
64 Marlborough Street
Dublin 1

Scoping for an EIS in relation to Waste Water Treatment Plant, Cork Lower Harbour, Co. Cork.

I am directed to refer to your letter of 18th June, 2007 inviting the observations of the Minister on the above.

The Ministers interest in the proposed project relates only to the part constructed on the foreshore and recommends that the following comments be taken into account during the production of the EIS.

1. Local fishing interests (commercial and angling) shall be notified in advance of commencement of the proposed construction works.
2. Full consideration should be given to the necessity to take all precautions to ensure that pollution of the general marine environment does not occur. It should be noted that in the event of any spillage or accident occurring below the high water mark of ordinary or medium tides, or above the high water mark which may impact on the foreshore during the carrying out of the works, or during operations following the completion of these works, the Irish Coast Guard would need to be notified immediately by telephone.
3. Details in relation to the Noise and Vibrations should be noted and limited in accordance with relevant legislation.
4. If the proposed development necessitates dredging for the marine crossing at Carrigaloe or at any other location, this should be specified in the EIS. Chemical analysis of sediments to be dredged should be undertaken to the satisfaction of the Marine Institute. A sampling and analysis plan will be provided by the Marine Institute upon request for the sediments to be considered for sea disposal.

The results of the chemical sediments analysis shall be included in the application for a Dumping at Sea Permit if such a permit is required.

5. Details should be provided on the proposed methodology for laying the pipeline across the foreshore and the proposed timing and duration of such works.
6. The Government will be asked to make a decision on the designation of Shellfish Water at the end of July. Should waters in Cork Harbour be designated a higher standard of treatment and/or storm-overflow capacity may be required.
7. It has been noted that the proposal to commission a hydrodynamic model to examine the potential impacts of the increased volume of discharge to the existing outfall on the quality of receiving waters. The model outputs should be such that they can be related to relevant Environmental Quality Standards as may be required to meet the obligations under the Water Framework Directive.
8. Works on the Foreshore consequent to any grant of permission shall not commence until the applicant has acquired a legal interest in the Foreshore in question (e.g. ownership, lease, option etc).
9. The potential impacts on navigational safety and passage of migratory fish in relation to any in stream/ in river works should be considered.

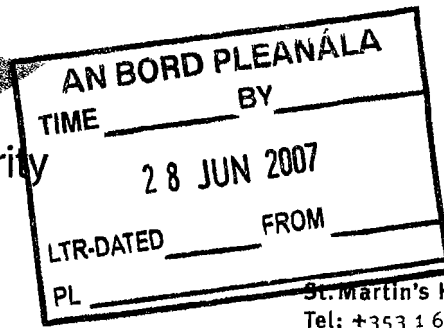
A copy of the Board's final report to the applicant should be sent to this Department. Should you have any further queries on this matter please contact the undersigned at telephone (01) 6783325, fax (01) 6783329 or Grace O'Brien at (01) 6783380.

Yours sincerely,

G O'Brien
pp **Geraldine Hayes**
Higher Executive Officer
Coastal Zone Management Division

AN BORD PLEANÁLA	
TIME _____	BY _____
17 JUL 2007	
LTR-DATED _____	FROM _____
PL _____	

Ms. Nichola McNamee
An Bord Pleanála
64 Marlborough Street
Dublin 1



St. Martin's House / Waterloo Road / Dublin 4
Tel: +353 1 660 2511 / Fax: +353 1 668 0009

Date 27th June 2007

Our Ref. NRA07-54619

Your Ref. JS 04.JS0002

Re: Wastewater treatment Plant, Cork Lower Harbour, Co. Cork

Dear Ms. McNamee,

I refer to your letter of 18th June 2007 regarding the above.

You may be aware that the Authority, in conjunction with local authorities, is undertaking a programme of major improvements to the network of national roads in line with policy set out by Government in Transport 21 (2006-2015) and the National Development Plan, 2007-2013. National roads fulfil a vital function in catering for the movement of people, freight and other goods throughout the country. The Authority's improvement programme involves substantial investment to address deficiencies in the network, improve the safety of road users and achieve a better level of service for users of the network through shorter journey times and greater predictability of journey time duration. The national roads programme also supports official policies on competitiveness, balanced regional development and the National Spatial Strategy. The provision and maintenance of high quality access routes to the regions and to designated hubs and gateways under the Spatial Strategy are fundamental to the achievement of the objectives of these policies.

The Authority attaches particular importance to the network of national roads continuing to play the intended strategic role in catering for inter-urban and inter-regional transport requirements. Accordingly, the Authority strongly advocates solutions whereby local traffic generated by developments is catered for primarily within the framework of the local (i.e. non-national) road network rather than overload the national roads in the area concerned with such local traffic, thereby compromising their strategic role and function. Similarly, the Authority has special interest in seeking to ensure that proposed development will not prevent or compromise plans for new national roads, including indicative, e.g. provision made in planning authority development plans, or approved routes for such roads, nor interfere with the future upgrade of existing national roads. However your attention is directed to the Authority's *Policy Statement on Development Management and Access to*

National Roads which provides comprehensive information for developers and decision makers on the principles guiding the NRA's approach towards proposed developments impacting upon national roads. The principles concerned, as well as the general content of the policy statement, will be informative for those engaged on the scoping of Environmental Impact Statements (EISs) and it is recommended that the document should be consulted. The statement highlights the key policies and issues concerning national roads such as the protection of the substantial investment being made in upgrading the network, maintaining efficiency/satisfactory levels of service, preserving high standards of road safety and avoiding the premature erosion of these benefits, as well as preserving intact routes for planned future roads and road improvements. The policy statement is available to view/download on our website www.nra.ie.

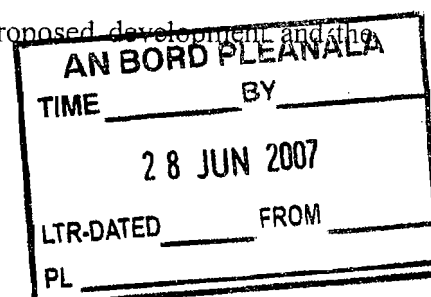
The Authority has produced a number of other guidance documents intended primarily for the planning, construction and operation of national roads but which may also prove to be a useful reference source when scoping EISs for other development proposals. The guidelines concerned, which can also be viewed/downloaded from the Authority's website, include:

- Environmental Impact Assessment of National Road Schemes – A Practical Guide.
- Guidelines for the Treatment of Noise and Vibration in National Road Schemes.
- Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes.
- Road Safety Audit Guidelines (NRA HA 42/04) and Road Safety Audit (NRA HD 19/04).

The comments set out below on the scoping of EISs for proposed development that could impact on or have implications for the capacity, operation and safety of national roads, including proposed new roads or the upgrade of existing roads, are furnished as general guidance only and do not prejudice the Authority's statutory right to make observations, requests for further information, objections or appeals following the examination of any valid planning application which you make and which is subsequently referred to the Authority by the planning authority for consideration in line with the Authority's status as a statutory consultee under planning legislation. It will be a matter for promoters of development/their consultants to determine the relevance of the matters identified having regard to the nature, scale, location and particular characteristics of the proposed development and, based on conclusions reached, to decide the extent, if any, the matters concerned should be addressed in the scoping report/EIS.

In preparing the scoping report/EIS, it is recommended that the developer should:

- Establish the relationship between the location of the proposed development and the national road(s) in the area vis a vis:
 - existing national roads;



AN BORD PLEANÁLA	
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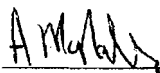
- proposals to provide new national roads or improve existing national roads, and
 - means of access to/from the development to/from the national road(s).
- Establish the traffic carrying capacity of the existing/planned national road(s), traffic volumes currently being catered for, anticipated increase in traffic volumes based on current expectations (exclusive of traffic to be generated by the proposed development the subject of the EIS scoping request) and level of service provided by such roads. (Developers may wish to consult the local planning authority, road authority/County Council – City Council, or National Road Regional Design Office for the area for assistance on the foregoing matters.)
- Identify the trips/traffic generating potential of the proposed development and the manner in which this will be catered for/accommodated, e.g. modal split between roads (national and non-national), public transport, cycling, walking.
- Assess the implications of the trips/traffic generated that are to be accommodated on national roads, including associated junctions/interchanges, for the capacity, operation, level of service and safety of national roads. (Where appropriate, a Traffic and Transport Assessment, carried out in accordance with relevant guidelines and best practice procedures, should be undertaken in respect of the proposed development – the local planning authority can advise in relation to thresholds for TTAs.)
- Identify measures required to improve national roads/increase their capacity so as to cater for trips/traffic generated by the proposed development, including any appropriate traffic management measures. (The Authority, in considering any subsequent planning application in respect of the proposed development, may require submission of details of the private funding arrangements proposed so as to implement identified road improvement and management measures.)
- Quantify the vehicle exhaust emissions from traffic generated by the proposed development and the impacts on air quality along the national road(s) used by such traffic. Local air quality assessments should at minimum focus upon nitrogen dioxide and PM₁₀, as these are the pollutants of greatest concern with respect to road traffic emissions, i.e. they are the pollutants at greatest risk of exceeding the statutory air quality standards. Implications for public health in the area, including that of residents and any other sensitive receptors, should be assessed and indicated.
- Quantify the road traffic noise implications attributable to traffic generated by the proposed development which will use national roads in the area of influence. Impacts should be assessed in respect of the road traffic noise design goals specified in the Authority's Guidelines for the Treatment of Noise and Vibration in National Road Schemes. Impacts for sensitive receptors adjoining the national roads concerned and any new sensitive receptors to be created as part of the proposed development, e.g. new residential areas, should be determined and indicated. Noise mitigation measures should be identified, where appropriate, having regard to the Authority's design goals for road traffic noise on national roads. (The Authority will require the developer, as

part of any subsequent planning application, to identify and implement noise mitigation measures, where warranted, where the additional traffic generated by the development results in a breach of the noise design goals on national roads. The Authority will require a similar approach, i.e. identification and implementation of mitigation measures by the developer, where development proposals are brought forward within the zone of influence of existing national roads or of planned new national roads, provision for the construction of which has been made in the planning authority's development plan, in circumstances where the proximity of the proposed development to the national road would result in the breach of the Authority's design goal for sensitive receptors exposed to road traffic noise.)

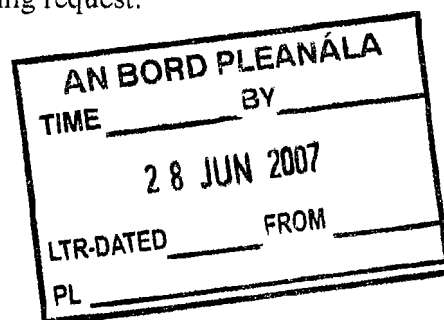
- Assess and indicate the potential for dust and other material deposition on national roads during the construction and operation of the proposed development, including the implications, if any, for the safety of road users. Potential impacts on national road drainage systems and the receiving environment should form part of the assessment. (Where appropriate, mitigation measures should be specified in the EIS/planning permission application.)
- In the case of a proposed quarry development:
 - assess whether blasting and associated vibration have the potential to affect bridge structures on national roads and the road structure itself (existing or planned national roads), current or proposed, and
 - undertake an assessment as to whether 'fly-rock' associated with blasting could affect road safety.

It should be noted that the foregoing matters are not intended to provide a comprehensive list of issues which should be considered/addressed as part of the EIA insofar as proposed development may impact upon national roads. It remains the responsibility of the developer to ensure the adequacy of the EIA/EIS. As already indicated, the Authority, in offering the foregoing comments and suggestions on the scope of the EIS, retains its statutory right to make observations, objections or appeals in respect of any subsequent planning application. The contents of this letter should neither be interpreted as support for nor an objection to the proposed development that is the subject of the EIS scoping request.

Yours sincerely,



Annamarie McNally
Programme Administrator





Bord Iascaigh Réigiúnach an Iardheiscirt
South Western Regional Fisheries Board

Your ref.: PL JS04.JS0002

Ms Nichola Mc Namee
An Bord Pleanála
64 Marlborough Street
Dublin 1.

09 July 2007

AN BORD PLEANÁLA	
TIME	09
10 JUL 2007	
LTR-DATED	FROM
PL	



Fisheries Ireland
Our Natural Heritage

RE: Waste Water Treatment Plant, Cork Lower Harbour, County Cork.

Dear Ms Mc Namee,

I refer to your letter dated the 18th June concerning information to be contained in an environmental impact statement for Cork County Council's Waste Water Treatment Plant for the Cork Lower Harbour Area.

The proposals in relation to impacts on fisheries and water quality affecting fisheries include the following.

1: Marine Pipeline Crossing:-direct physical impact on waters containing fisheries and effects of sediment disturbance. The impact of the placement of the pipeline on fish species present in the immediate and far field area should be assessed as should the impact on any commercial and amenity fisheries which operate in the vicinity. e.g. impact on crustacea and exploitable sea fish species, impact on salmon draft net fishery and on sea angling locations etc.

2: Pipeline Route and Pumping stations:

Pipeline route:-where it involves stream and river crossings should be assessed for potential impacts on fisheries habitat and water quality.

Pumping Stations:-Assessment of the potential for untreated effluent to discharge to harbour waters and Monkstown Creek and possible impacts.

3: Discharge of treated effluent via existing IDA outfall.

Potential impacts on crustacean and fish species in the area of discharge should be assessed as should the effects of increased nutrient loadings on the Lower Harbour Area which is periodically affected by phytoplankton blooms

The above potential impacts should be included in any assessment with mitigation measures proposed to avoid, minimise and offset impacts identified.

Yours sincerely,

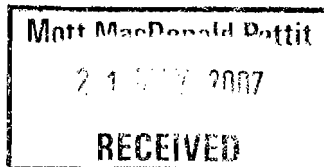
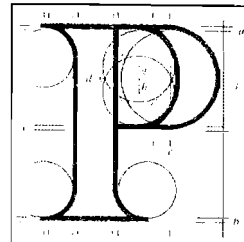
Patricia O'Connor
Senior Environmental Officer.

The South Western
Regional Fisheries Board
1, Neville's terrace
Masthead

Our Ref: JS 04.JS0002
P.A.Reg.Ref:
Your Ref: Cork County Council

A5670

An Bord Pleanála



Orla Freyne
Mott MacDonald Pettit
5 Eastgate Avenue,
Eastgate,
Little Island,
Co. Cork.

18th May 2007

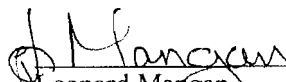
Re: Wastewater Treatment Plant, Cork Lower Harbour, County Cork

Dear Sir/Madam,

An Bord Pleanála has received your request for a written opinion on the information to be contained in the environmental impact statement to be prepared in respect of the above-mentioned proposed development.

Your request will be processed in accordance with the provisions of article 95 of the Planning and Development Regulations, 2001.

Yours faithfully,


Leonard Mangan
Administrative Assistant

es01p.ltr

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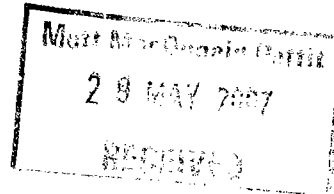
Patron:
Mr. Pat Falvey

President:
Mr. Gordan D'Arcy

Batline: +353 46 9242882 Website: www.batconservationireland.org Email: batline@eircom.net

Bat Conservation Ireland
Deerpark House,
Tierwurcher,
Kells,
County Meath.

FAO: **Orla Freyne,**
Mott MacDonald Petit,
Consulting Engineers,
5 Eastgate Avenue, Eastgate,
Little Island, County Cork.



29th May 2007

Re: Proposed Waste Water Treatment Plant, Cork Lower Harbour Area – Bat Conservation Ireland Consultation

To Whom It May Concern:

I am writing in relation a consultation letter sent by your company in relation to the EIA Study for the above scheme.

The seriousness of the decline of bat population across Europe has led to the establishment of conservation programmes and appropriate legislation to stabilise population numbers. In the Republic of Ireland, flora and fauna are protected by the Wildlife Act 1976. All species of bat and their roosts are protected by the law and it is an offence to kill, disturb, handle, sell or offer any bat whether alive or dead, without an appropriate license. The Wildlife Amendment Act 2000 improves the conservation of both species and their habitats and gives statutory protection to Natural Heritage Areas (NHAs). Potentially the most important legislation for the protection and conservation of flora and fauna and their natural habitat is the EC Habitats Directive 1992 (EEC 92/43), which lists habitats and species of European conservation importance. All bat species, apart from Lesser horseshoe bat which is an Annex II species, are listed as Annex IV species. Member States must achieve a favourable conservation status for bat species. This involves measures that will stabilize the population dynamics of the species, so that it maintains itself on a long-term basis as a viable component of the natural habitat. Therefore, each Member State must prevent the natural range of the species from reducing and thus takes measures to ensure suitable habitat remain in the long-term.

A database search of the Bat Conservation Ireland database was undertaken for a 10km radius of the following of the Grid Reference W7666. This grid reference point represents the centre of the proposed scheme and was used for the database search. The database presents results as either 'Roosts' or 'Transects'. Roosts are dwelling areas for bats and are categories as maternity, hibernation, night or satellite roosts, the first two being high priority sites. Transects represent data collated by 'car transects', 'waterway transects' or 'walkabout transects'. Results are presented in table below. A total of three species of bat were recorded within the study area with additional records for 'Unidentified *Pipistrelle* bats'. One hundred and one roost records and fifty transects records are located within the study area with records dating from 1987 to present time.



Patron:
Mr. Pat Falvey

President:
Mr. Gordan D'Arcy

Batline: +353 46 9242882 Website: www.batconservationireland.org Email: batline@eircom.net

Bat Conservation Ireland
Deerpark House,
Tierwurcher,
Kells,
County Meath.

Table 1: Bat records currently available on the BCireland database.

Species	W7666		Details
	Roost	Roost	
Common pipistrelle	NR	2	Grid Refs: W7814867380, W6678661559
Soprano pipistrelle	NR	1	Grid Refs: W7398262775
Nathusius pipistrelle	NR	NR	
Pipistrelle spp.	1	1	Maternity Roost at W6657, Transect Grid Ref: W6974267868
Daubenton's bat	NR	NR	
Natterer's bat	NR	NR	
Whiskered bat	NR	NR	
Brandt's bat	NR	NR	
Myotis spp.	NR	NR	
Brown long-eared	NR	NR	
Lesser horseshoe	NR	NR	
Unidentified bat	NR	NR	
Leisler's bat	NR	2	Grid Refs: W7398262775, W6678661559

NR – No records currently available on BCireland database. Bat species where records are not currently available does not mean that this species is not present within the study area. Surveying for such species is recommended.

Bat Conservation Ireland recommends that a bat survey is part of the Environmental Report for the road scheme to determine the roosting, commuting and foraging potential for local bat populations. In general, developments in close proximity to an important roost have a negative impact on the reproductive success of a bat colony. The impacts from developments tend to increase noise and light levels, which are known to negatively impact on bats. The potential of the development to impact on commuting routes and access to foraging areas also needs to be considered. It is, therefore essential, that all survey work is undertaken at the appropriate time of the year and undertaken in appropriate weather conditions to ensure that information gathered provides the appropriate information to make an assessment of the potential impacts of the scheme on local bat populations. Survey techniques should also be customized to survey all bat species e.g. Lesser horseshoe bats are difficult to detect in the field by the use of bat detectors. Methods used should adequately sample all potential species located within the survey area.

Bat Conservation Ireland officially came into existence in 2004 and now acts as the national umbrella group for all county bat groups. Bat Conservation Ireland is affiliated with the Irish Wildlife Trust and works closely with many NGOs, The Heritage Council and NPWS Conservation Rangers. Bat Conservation Ireland manages the All Ireland Bat Monitoring Programme in conjunction with Bat Conservation Trust UK and under the funding and assistance of the Heritage Council, NPWS (Department of Environment, Heritage and Local Government), EHS (Department of Environment Northern Ireland) and Waterways Ireland. We provide information on the conservation of bats to public enquires and will assist the general public in their needs in relation to bats. The group is also involved in providing training in the use of bat detectors through organising bat detector workshops. The



Patron:
Mr. Pat Falvey

President:
Mr. Gordan D'Arcy

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Bat Conservation Ireland
Deerpark House,
Tierwurcher,
Kells,
County Meath.

erection of bat boxes, field surveys and the collection of data on bat distribution in the country are on going group projects.

Yours truly,

Dr Tina Aughney
Conservation Officer, Bat Conservation Ireland

BIBLIOGRAPHY

Altringham, J. D. (1996) *Bats: Biology and Behaviour*. Oxford University Press.

Fairley, J. (2001) *A basket of weasels*. Published Privately, Belfast.

Hayden, T. and Harrington, R. (2000) *Exploring Irish Mammals*. Town House, Dublin.

National Roads Authority (2006a) *Best Practice Guidelines for the Conservation of Bats in the Planning of National Road Schemes*. National Roads Authority

National Roads Authority (2006b) *Guidelines for the Conservation of Bats during the Construction of National Road Schemes*. National Roads Authority

O' Sullivan, P. (1994) Bats in Ireland. *Special Zoological Supplement, The Irish Naturalists' Journal*.

Richarz, K., and Limbrunner, A. (1993) *The world of Bats: the flying goblins of the night*. T.F.H. Publications Inc.

Whilde, A. (1993) *Threatened mammals, birds, Amphibians and fish in Ireland. Irish Red Data Book 2: Vertebrates*. Belfast, HMSO.

P.O. Box 12
Greystones
Co. Wicklow

Patron
Mary McAleese
President of Ireland

Éarlámh
Máire Mhic Giolla Íosa
Uachtarán na hÉireann

BirdWatch Ireland
Cairde Éanlaith Éireann

Orla Freyne
Mott MacDonald
5 Eastgate Avenue
Little Island
Co. Cork

1 June 2007

Dear Orla,

RE: Proposed new waste water treatment plant for the Cork Lower Harbour area

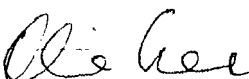
I am responding to your letter dated 11 May 2007 in relation to the above development.

Cork Harbour is highly important for wintering waterbirds, and has been consistently ranked among the top 10 most important sites in Ireland over the past 30 years. Numbers using this site have been regularly monitored since the 1970s, more recently as part of the Irish Wetland Bird Survey (I-WeBS)¹, since 1994. The data that have been gathered throughout this period have been used to justify the importance of this site in an international context. Accordingly, Cork Harbour has been designated a Special Protection Area (SPA, site code 4030) under the EU Birds Directive (79/409/EEC).

BirdWatch Ireland recommends that efforts are made to ensure that there is no deterioration in waterbird habitat quality, which might be caused by pollution and dredging of the mudflats, and that little disturbance is caused to wintering waterbirds during any construction.

Please get back to me for any further clarification, or if you would like any further information on I-WeBS.

Yours sincerely,



Olivia Crowe
Conservation Officer

¹ I-WeBS is a joint project of BirdWatch Ireland and the National Parks and Wildlife Service of the Department of the Environment, Heritage and Local Government.



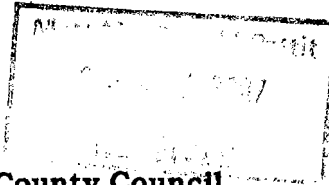
Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

23rd May, 2007

Our ref: 32523

Ms. Orla Freyne
Mott MacDonald Pettit
5 Eastgate Avenue
Little Island
Cork




Re: EIS Statement by Cork County Council

Dear Ms. Freyne

This letter is in response to your EIS Statement received by us on the 21st May.

Please note at this point in time, the Commission does not have any comments to make on your EIS Statement.

Yours sincerely,


Cathy Mannion
Director of Environment
Retail & Consumer Affairs

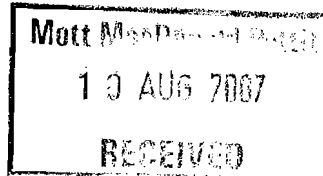
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The Exchange, | Tel: +353 1 400 0800
Belgard Square North, | Fax: +353 1 400 0850
Tallaght, | Website: www.cer.ie
Dublin 24, Ireland



9 August 2007

Your Ref: PA567000016n.doc
Our Ref: G2007/337



Ms. Orla Freyne,
Mott McDonald Pettit,
5 Eastgate Avenue,
Little Island,
Cork.

PA5670

Re: Proposed Waste Water treatment Plant at Cork Harbour Lower

Dear Ms. Freyne,

We refer to the Council's notification in relation to the above-proposed development. Outlined below are the archaeological recommendations of the Department of the Environment, Heritage and Local Government,

As part of an environmental review of the project this office will require a full archaeological impact assessment to be carried out and the results of the same to be forwarded to this office.

In assessing impacts on the archaeological heritage regard must be had to the following:

The area's monuments can be identified from the Record of Monuments and Places, County Cork and the Urban Archaeology survey. Those monuments that are National Monuments in State ownership or guardianship and monuments subject to Preservation Orders should be identified and zones of visual amenity defined for them. It should be noted that any direct impact on national monuments in State or Local Authority care or subject to a preservation order will require the consent of the Minister for the Environment, Heritage and Local Government under section 14 of the National Monuments Act 1930 as amended by Section 5 of the National Monuments (Amendment) Act 2004. Areas of high archaeological potential including subsurface archaeological structures should be identified. A pointer to the potential for the occurrence of subsurface archaeology is the annual Excavations Bulletin, which contains brief accounts of excavations conducted in Ireland each year; these reports are also at www.excavations.ie. Information on occurrences of chance finds of archaeological objects is also a useful indicator of archaeological potential – information may be obtained from the National Museum and local museums. Any potential impacts on archaeological heritage should be subject to full archaeological assessment.

Finally, this recommendation is based on the papers submitted to this Department on a pre-planning basis and is made without prejudice to any decision the Minister may take upon sight of a formal planning application or the submission of an Environmental Impact Statement.

Mise le meas,

Teresa Halloran
Teresa Halloran,
Development Applications Unit.



From: DIKeane@eircom.ie
Sent: 25 May 2007 09:55
To: Freyne, Orla
Cc: JCasey@eircom.ie
Subject: Proposed New Waste Water Treatment Plant for the Cork Lower Harbour Area

Orla

Thank you for your letter dated 11th May 2007 (Ref OF/kos)

I wish to make the following submission on the proposed New Waste Water Treatment Plant for the Cork Lower Harbour Area.

1. eircom has an extensive duct, copper and fibre network in the area, providing telecommunication services to the surrounding areas. It is critical that this network is not interfered with during construction. On submission of a detail design drawing of the proposed waste water network, eircom will provide you/your contactor with a drawing of the eircom as-built network. Please submit such requests to pdbureau@eircom.ie (with subject title 'Dial before you Dig') during the planning/design stage of the project. In the event that our network is damaged during construction, eircom on repairing the damaged network, will submit invoices to Cork County Council for such damage. In addition, Cork County Council will be liable for any loss of earnings directly attributable to the damage.

2. eircom may wish to submit a proposal to install additional duct on selected sections of the proposed work, in order to avoid duplication of roadworks activity thereby minimising disturbance to local residents and commuters. Local network planner John Casey (ph: 085 1742132, email: jcasey@eircom.ie) will be in contact with you at a later date with a proposal, if eircom has such a requirement for additional duct in the area.

If you have any queries, don't hesitate to call me

Regards
Dan Keane
National Planning Manager
eircom Network Engineering
Access Network Master Planning Unit
Mob: +353 85 1742272
email: dlkeane@eircom.ie
Instant Meeting: +353 1 6647777 Pin 21038#

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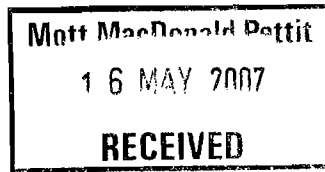
Office of
Environmental
Enforcement

Headquarters, PO Box 3000,
Johnstown Castle Estate
County Wexford, Ireland

Ceanncheathrú, Bosca Poist 3000,
Eastát Chaisleán Bhaile Sheáin
Contae Loch Garman, Éire

T: +353 53 916 0600
F: +353 53 916 0699
E: info@epa.ie
W: www.epa.ie

Lo Call: 1890 33 55 99



Ms Orla Freyne
Mott MacDonald Pettit
5 Eastgate Avenue
Little Island
CORK

14 May 2007

PA 4787

Dear Ms Freyne

I wish to acknowledge receipt of your Request to the Statutory Consultees for a written opinion on the information to be contained in an Environmental Impact Statement for the proposed Waste Water Treatment Plant at Cork Lower Harbour.

This request has been forwarded to Mr Tadhg O'Mahony in our Inniscarra office, and any comments he may have will be conveyed to you before the deadline.

Yours sincerely

Dara Lynott
Director
Office of Environmental Enforcement

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From: Martin Ryan (Planning) [Martin.Ryan@CorkCoCo.ie]
Sent: 21 May 2007 16:09
To: Freyne, Orla
Subject: proposed WWTP, Shanbally, Co. Cork
Dear Orla,

I am in receipt of your document request to the statutory consultees for a written opinion on the information to be contained in an EIS. This email relates solely to the built environment. The site of the proposed WWTP is on Map 16 Heritage and Scenic Amenity in the 2003 County Development Plan. The proposed development does not impact on any structure listed in the Record of Protected Structures in the 2003 County Development nor is the site located in an Architectural Conservation Area. The nearest protected structures listed are 00579 Warehouse, Carrigaline east, 00576 St. Mary's Church of Ireland Church, Carrigaline and 00577 Coolmore House Coolmore.

In addition the following recorded monuments are identified in the town land of Shanbally

Sites & Monuments (4,000 - 30,000):

Circular enclosure - Imfhálú ciorclach\nMonument No is CO087-041---

Sites & Monuments (4,000 - 30,000):

Enclosure - Imfhalú\nMonument No is CO087-040---

Sites & Monuments (4,000 - 30,000):

Ringfort (rath \ cashel) - Ráth (lios \ caiseal)\nMonument No is CO087-039---

Thanking you
Martin Ryan
A/SEP Heritage Unit
Cork County Council

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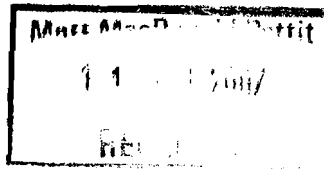


IRISH AVIATION AUTHORITY
ÚDARÁS EITLÍOCHTA NA hÉIREANN

AVIATION HOUSE, HAWKINS STREET, DUBLIN 2, IRELAND
TEL: (01) 671 8655 FAX: (01) 679 2934
WEB SITE: www.iaa.ie

16th March 2007

Mott MacDonald Pettit
5 Eastgate Avenue
Little Island
Cork



Re: Proposed Waste Water Treatment Plant at Cork Lower Harbour

Dear Sir

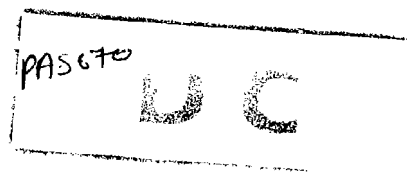
I refer to the company's recent request to the Irish Aviation Authority concerning Cork County Council's plans for the proposed waste water treatment plant at Cork Lower Harbour.

I wish to advise that we have no observations on the Council's proposals.

Thank you for bringing the matter to our attention.

Yours sincerely


Tom Cooney
Corporate Affairs



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REGISTERED OFFICE: AVIATION HOUSE, HAWKINS STREET, DUBLIN 2, IRELAND
REGISTERED NO. 2 1082 PLACE OF REGISTRATION: IRELAND
A LIMITED LIABILITY COMPANY

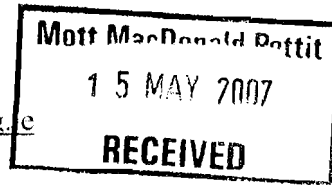


BOARD OF DIRECTORS:
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NEEL BRANAGAN, PHEIP CAFFREY, FRANK CONWAY, ANNE COUNIHAN,
FIONA DOWLING, JACQUELINE JAMESON, ANNE NOLAN

O. Freyne

Merchants Quay
Kilrush,
County Clare

Tel: 00 353 86 8545450
Fax: 00 353 65 9052326
Email: Simon.Berrow@iwdg.ie



14 May 2007

RE: New Waste Water Treatment Plant for Lower Cork Harbour

Dear Orla,

1045670

Many thanks for your letter regarding the proposed construction of a New Waste Water Treatment Plant for Lower Cork Harbour(Ref OK/kos).

The IWDG would not have any major concerns over this proposed development. I note that you plan to construct a pipeline across the harbour at Monkstown. We would need to know how this is to be achieved. Is blasting involved? Rock armour?

Cork harbour is however an important habitat for cetaceans (whales, dolphins and porpoise). We have many records of a wide range of species including both species on Annex II of the Habitats Directive (harbour porpoise and bottlenose dolphin) as well as common, striped and Risso's dolphin and killer whales.

More specifically we have been monitoring a group of 6-10 bottlenose dolphins in the mouth of Cork harbour since February 2006. These dolphins have been largely resident in the area and have attracted a lot of local attention. The National Parks and Wildlife Service (NPWS) have recently started requesting acoustic assessment of the impact of explosives on marine mammals in relation to sewage and other pipelines. The design has now to take into account agreed mitigation measures for minimizing the impact on marine mammals.

We are happy to carry out a review of cetacean data for Cork harbour in relation to this project if required.

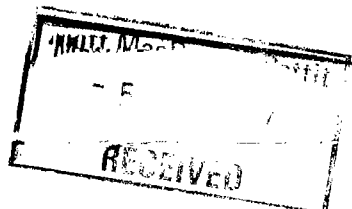
I hope this is useful and I would appreciate being kept informed of this development.

Yours sincerely,

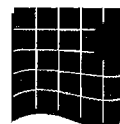


Dr Simon Berrow
IWDG Co-ordinator

Orla Freyne
Mott McDonald Petit
5 Eastgate Avenue
Eastgate
Little Island
Co. Cork



Marine Institute
80 Harcourt Street
Dublin 2
Tel: +353 1 4766500
Fax: +353 1 4784988
Email: institute.mail@marine.ie



Marine Institute
Foras na Mara

30/05/2007

Re: Data request – Propose new Waste Water Treatment Plant for the Lower Cork Harbour Area

Dear Orla

Thank you for your letter of 11th May last in connection with the above.

The Marine Institute has an online data and information system which can be found at the following address

<http://www.marine.ie/home/publicationsdata/data/>

Marine Data Online is a **metadataservice** that provides quick and easy access to **summary information** on data and project archives of the Marine Institute and other marine research organisations in Ireland.

Specific data request should be made on line at the following address

<http://www.marine.ie/home/publicationsdata/RequestForData.htm>.

I hope that this is of help

Best regards

Dr. Terry McMahon

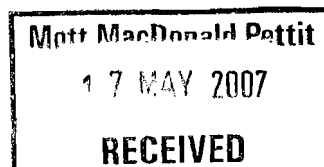
Marine Institute
Rinville
Oranmore
Galway
Tel: +353 91 387 200
Fax: +353 91 387 201

Marine Institute
Furnace
Newport
Co. Mayo
Tel: +353 98 42300
Fax: +353 98 42340

website: www.marine.ie



Ms Orla Freyne
Mott MacDonald Pettit
5 Eastgate Avenue
Little Island
Cork



St. Martin's House / Waterloo Road / Dublin 4
Tel: +353 1 660 2511 / Fax: +353 1 668 0009

PAS670

15th May 2007

Re: EIS Scoping Request For Cork Waste Water Treatment Scheme

Dear Ms Freyne

The Authority wishes to advise that it is not in a position to engage directly with prospective planning applicants in respect to proposed developments. The Authority will endeavour to consider and respond to planning applications referred to it by given its status and duties as a statutory consultee under the Planning Acts. The approach to be adopted by the Authority in making such submissions or comments will seek to uphold official policy and guidelines as outlined in our Circular 6/2006 "**Policy Statement on Development Management and Access to National Roads**" and other relevant circulars, which are available at www.nra.ie.

The issuing of this correspondence is provided as best practice guidance only and does not prejudice the NRA's statutory right to make any observations, requests for further information, objections or appeals following the examination of any valid planning application referred.

With respect to EIS scoping issues, the recommendations indicated below provide only general guidance for the preparation of EIS for proposals, which may affect the National Roads Network:

The developer should have regard, *inter alia*, to the following:

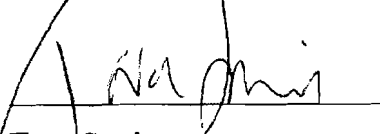
- Consultations should be had with the relevant Local Authority/National Roads Design Office with regard to locations of existing and future national road schemes especially in respect to the N28.

- The developer should have regard to any Environmental Impact Statement and all conditions and/or modifications imposed by An Bord Pleanála regarding road schemes in the area. The developer should in particular have regard to any potential cumulative impacts.
- The EIS should address the impacts of dust generated by activities on roads including:
 - The soiling of roads from dust generated from both the development activity and vehicles traveling to and from the site;
 - Whether such soiling may increase the risk of accidents; and,
 - The affect such soiling and runoff will have on the existing road drainage system.
- The developer, in conducting Environmental Impact Assessment, should have regard to the NRA DMRB and the NRA Manual of Contract Documents for Road Works.
- The developer, in conducting Environmental Impact Assessment, should have regard to the NRA's Environmental Assessment and Construction Guidelines, including the *Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes* (National Roads Authority, 2006);
- The EIS should consider the Environmental Noise Regulations 2006 (SI 140 of 2006) and, in particular, how the development will affect future action plans by the relevant competent authority. The developer may need to consider the incorporation of noise barriers to reduce noise impacts (see *Guidelines for the Treatment of Noise and Vibration in National Road Schemes* (1st Rev., National Roads Authority, 2004));
- It would be important that, where appropriate, subject to meeting the appropriate thresholds and criteria, a Traffic and Transport Assessment be carried out in accordance with relevant guidelines and best practice;
- The designers are asked to consult the National Roads Authority's *Road Safety Audit Guidelines* (NRA HA 42/04) and *Road Safety Audit* (NRA HD 19/04) to determine whether a Road Safety Audit is required;
- As the construction of a large impermeable area has the potential to generate greater runoff with an earlier runoff peak, the Authority would ask that

- mitigation measures be investigated to ameliorate this and, where appropriate, that consideration of the use of pollution control devices be considered;
- The developer should assess visual impacts from the existing and proposed national road.
 - The EIS should have regard to the likely significant impacts the development may have on the human beings due to the proximity to the national route.

Notwithstanding, any of the above, the developer should be aware that this list is non-exhaustive thus site and development specific issues should be addressed in accordance with best practise.

Yours sincerely



Tara Spain
Planner

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**Flood Risk Assessment
& Management Section**
Engineering Services
The Office of Public Works
17-19 Lower Hatch Street,
Dublin 2

Tel: 00353 1 647 6546
(direct dial)
Fax: 00353 1 676 1714

FAX MESSAGE

Date - 31st May 2007
F.A.O. - Orla Freyne
Fax Number - 021-4809801
From - Gerry Gallagher
Page Number - One of Two

**RE: Request for Information to be contained in EIS for Proposed Waste
Water Treatment Plant, Cork Lower Harbour.**

Orla,

Had the opportunity to exam your request for the written submissions on the information to be contained in the Environmental Impact Statement for the proposed Waste Water Treatment Plant. Cork Lower Harbour.

As you may be aware, The Office of Public Works, Cork County Council and Cork City Council are undertaking a Catchment Flood Risk Management and Assessment Study for the Lee. More details of this study are available on the project website:- www.leecframs.ie.

Accordingly the issue of any potential flood risk in the area that may result from the proposed works should be addressed as part of the Environmental Assessment process for the project.

Destination fax number:021-4809801




**Flood Risk Assessment
& Management Section**
Engineering Services
The Office of Public Works
17-19 Lower Hatch Street,
Dublin 2

Tel: 00353 1 647 6546
(direct dial)
Fax: 00353 1 676 1714

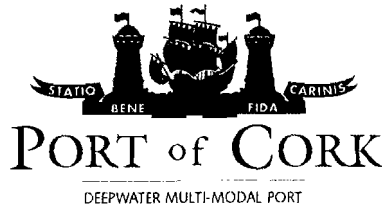
I am aware that the project is at a very early stage and detailed designs are not available at this time. I would therefore be most grateful if you could forward such details as they become available.

If you require any further information or wish to discuss any issues raised please don't hesitate to contact me.


Gerry Gallagher,

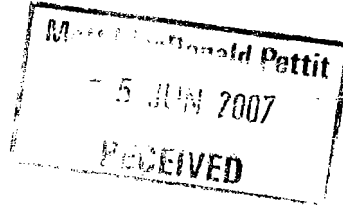
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Destination fax number:021-4809801



29 May 2007

Ms Orla Freyne,
Mott McDonald Pettit,
South Block,
Rockfield,
Dundrum,
Dublin 16,



Re: Proposed New Waste Water Treatment Plant For The Cork Lower Harbour Area.

Dear Ms Freyne,

Thank you for your letter dated 11th May 2007.

We do not feel that we are in the possession of any relevant information on the receiving environment which would not be in the possession of your firm or Cork County Council. However, we can facilitate access for you to any hydraulic modelling which has been undertaken by consultants on our behalf in relation to our own projects which may be of some assistance to you. If so, please revert.

We look forward to the project moving on to the Environmental Impact scoping stage during which we presume we will be consulted. Issues for us will, of course, be the proposed river crossing upstream of Monkstown as well as Storm water / Overflow discharges to the river and the additional discharges in the IDA outfall.

We look forward to hearing from you in due course.

Kind regards

Yours sincerely,

Denis Healy,
Manager Engineering Services

**Radiological Protection Institute of Ireland**

An Institiúid Éireannach um Chosaint Raideolaíoch

22 May 2007

Ms Orla Freyne
Mott MacDonald Pettit
5 Eastgate Avenue
Eastgate
Little Island
Co Cork

Re: Proposed New Waste Water Treatment Plant for the Cork Lower Harbour Area

Dear Orla

Thank you for the opportunity to comment on this application. We don't have any comments on the proposed plan. The only observation is that if any radiological devices are used for density measurements or x-ray equipment is used for non-destructive testing on welds during the construction phase, a licence will be required from the Institute by the contractor.

If samples taken for a suite of measurements require radionuclide identification, then the Institute's environmental radioactivity laboratory may be in a position to analyse same. For further information please see our website www.rpii.ie

Hope this is useful and if you have any queries please do not hesitate to contact us.

Yours sincerely

Jarlath T Duffy BSc(ApplSc), MAppSc(ApplPhys), CSci, CPhys, MInst, MSRP.
Manager, Industrial Section
Regulatory Services Division
Radiological Protection Institute of Ireland

Direct Phone 01 206 6945, Direct Fax 01 260 5797, Email jduffy@rpii.ie

-----Original Message-----

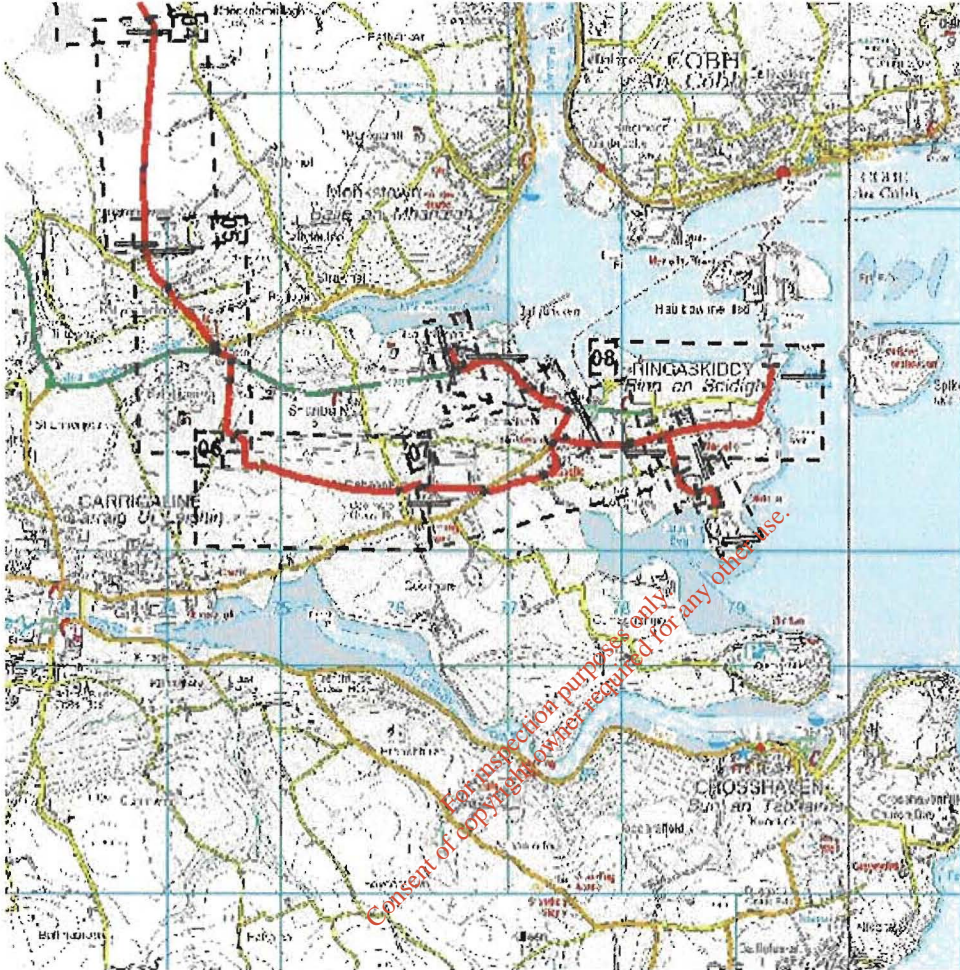
From: Joe Kehoe [mailto:JKEHOE@bge.ie]

Sent: 16 May 2007 09:51

To: O'Dwyer, Colum

Cc: Donncha O'Sullivan

Subject: Cork Harbour area Transmission pipelines



Colum.

Please see above the route our Transmission pipeline in the Ringaskiddy area and attached also is a copy of our "Code of Practice for Working in close proximity to a Transmission pipeline". Please note we have a 14 meter Wayleave over the pipeline on which no permanent structures are allowed and all work on the Wayleave must be in compliance with the Code of Practice.

When you require more detailed info please contact Donncha or myself.

Regards,
Joe.

Joe Kehoe,
Operations Engineer, Southern Region,
Bord Gais Eireann,
Gasworks Rd,
Cork,
Tel No 021 4534206
Mobile No 087 2424878.

Údarás Réigiúnach an Iar-Dheiscirt

South West Regional Authority

www.swra.ie

Ms. Orla Freyne
Mott MacDonald Pettit
5 Eastgate Avenue
Eastgate
Little Island
Co. Cork



Innishmore,
Ballincollig,
Co. Cork,
Ireland.
Tel: 021-4876877
Fax: 021-4876872
Email: info@swra.ie



11th May 2007

PAGE 72

Re: Proposed New Waste Water Treatment Plant for the Cork Lower Harbour Area

Dear Ms. Freyne,

Thank you for your letter regarding the above proposed development, the details of which have been noted.

Yours sincerely,

A handwritten signature in black ink, appearing to read "John McAleer".

John McAleer
Director

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From: Martin Ryan (Planning) [Martin.Ryan@CorkCoCo.ie]

Sent: 21 May 2007 16:09

To: Freyne, Orla

Subject: proposed WWTP, Shanbally, Co. Cork

Dear Orla,

I am in receipt of your document request to the statutory consultees for a written opinion on the information to be contained in an EIS. This email relates solely to the built environment. The site of the proposed WWTP is on Map 16 Heritage and Scenic Amenity in the 2003 County Development Plan. The proposed development does not impact on any structure listed in the Record of Protected Structures in the 2003 County Development nor is the site located in an Architectural Conservation Area. The nearest protected structures listed are 00579 Warehouse, Carrigaline east, 00576 St. Mary's Church of Ireland Church, Carrigaline and 00577 Coolmore House Coolmore.

In addition the following recorded monuments are identified in the town land of Shanbally

Sites & Monuments (4,000 - 30,000):

Circular enclosure - Imfhálú ciorclach\nMonument No is CO087-041---

Sites & Monuments (4,000 - 30,000):

Enclosure - Imfhalú\nMonument No is CO087-040---

Sites & Monuments (4,000 - 30,000):

Ringfort (rath \ cashel) - Ráth (lios \ caiseal)\nMonument No is CO087-039---

Thanking you

Martin Ryan

A/SEP Heritage Unit

Cork County Council

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From: Michael Mc Partland [mcpartland@swrfb.ie]
Sent: 05 June 2007 16:32
To: Freyne, Orla
Subject: Cork Lower Harbour-WWTP
Orla,

Thanks for you recent letter in relation to the above-mentioned

The issues which the Board feels the EIS should address are as follows

- a) Impact of receiving water quality both chemically and micro-biologically of the discharge
- b) Impact of shellfisheries operating in the area
- c) Control of sediment runoff to surface water during the construction phase
- d) Measures to avoid and prevent pump station overflow discharges during the operational phase
- e) Impact of any proposed water crossings with pipes etc in terms of pollution potential, habitat restoration and timing of works

Michael McPartland
Senior Environmental Officer

South West Regional Fisheries Board
Sunnyside House
Macroom
Co. Cork
Tel 00 353 26 41221/2
Fax 00 353 26 41223
Email mcpartland@swrfb.ie
Web www.swrfb.com

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Appendix 1 B

Summary Report

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Cork Harbour Main Drainage Scheme

Summary of the Preliminary Assessment of Potential Environmental Impacts at the Two Short-listed Development Sites

February 2004

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Cork Harbour Main Drainage Scheme

Summary of the Preliminary Assessment of Potential Environmental Impacts at the Two Short-listed Development Sites

Issue and Revision Record

Rev	Date	Originator	Checker	Approver	Description
A	Feb 2004	EOB	FMcG	FMcG	Final For Issue

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1 Introduction

Two site options have been short-listed as development sites for the proposed Cork Lower Harbour Wastewater Treatment Plant. For the purposes of this discussion, these sites will be known as the 'Shanbally' site and 'Marino' site. The two sites are described below:

Shanbally Site:

This site is located in the townland of Shanbally approximately 1.5km to the north-east of Carrigaline and 2.5km to the west of Ringaskiddy. Although the site is zoned for Utilities and Infrastructure, it is located in a predominantly agricultural area with some industrial installations and facilities situated close-by. The proposed site itself consists of two large agricultural fields which are located on sloping ground and are currently used for pasture. The total area of these two fields is approximately 17.5 hectares, however the developable area within the sites is limited by the presence of two high voltage power lines which traverse the northern and southern ends of the site. The developable area between the power lines is approximately 7.35 hectares.

The boundaries of the two fields consist primarily of managed, immature to semi-mature hedgerow. With the exception of a small Bord Gais substation, which adjoins the south-west corner of the site, the site is bordered on all sides by adjoining agricultural fields. A large ESB substation is situated 180 meters west from the site boundary and Hibernian AFC sports grounds and clubhouse are located approximately 100 meters east of the site boundary.

Marino Site:

The Marino site is located in the townland of Marino on Great Island, just off the R624 Cork to Cobh road. The IFI factory is situated directly across the road from the site. The town of Cobh lies approximately three kilometres to the south-east. With the exception of the IFI industrial complex, the site is located in a predominantly agricultural area. The Marino site consists of two small agricultural fields (currently used for pasture) and a cleared area which was formally part of an old farmstead and is now largely overgrown with scrub and bushes. For the purposes of this report, the site also extends into two large wheat fields to the east. The approximate area of the site is 6 hectares.

The two smaller fields and the overgrown area are enclosed by mature hedgerows, mature treelines and/or stone walls. The two wheat fields are separated by a mature treeline. Small areas of mature woodland adjoin the site at both the northern and southern ends. A residence is also located adjacent to the southern boundary of the site. The Cork-Cobh railway line passes the western boundary of the site on the far side of the Cork-Cobh road.

A brief outline of the potential environmental impacts which may have implications for development of the two sites in question is given in the following section. The discussion follows the standard topics used for the purposes of Environmental Impact Statements.

Note that this is a preliminary assessment undertaken in the absence of specialist studies and opinions. It is therefore not possible to rule out the possibility of further findings being made at a later stage which may alter the conclusions of this assessment. Any decisions made on the basis of this report should take this into account.

2 Preliminary Impact Appraisal

2.1 Human Beings

In the context of the Cork Lower Harbour Main Drainage Scheme, development of either site will have the same positive impacts with respect to Human Beings. Positive impacts will occur in the areas of Economic Activity, Regional Employment, Housing development, Tourism and Recreation.

The main potential negative impact on Human Beings is likely to concern the negative perception that the general public have of municipal wastewater treatment plants.

Shanbally Site:

Noise, dust and vibration associated with the construction phase of the development may have slight, short-term negative impacts on the surrounding population, however, in real terms, with standard mitigation measures implemented and good management practice in place there should be no significant negative impact on Human Beings. This assessment is based on the relatively isolated position of the Shanbally site (the nearest residence is over 300 metres from the site boundary), the contained nature of the development, the lack of associated traffic and the positive implications of the development for the regional economy.

Marino Site:

This site is quite isolated from residential communities with the exception of a small residential area to the south of the site and the town of Passage West on the far side of West Passage. The main potential impact on the community in Passage West would be from a visual perspective only (the site is clearly visible from Passage West and the distance is considered to far for odours to a potential problem). However, visual impacts are normally addressed under the heading of 'Landscape' and not 'Human Beings'. The proximity of residences to the southern boundary of this site does create a significant potential nuisance impact on human beings. These issues are addressed in the corresponding sections below. A further issue that is likely to arise concerns the property value of the residential properties at the southern end of the Marino Site.

2.2 Flora & Fauna and Water Quality

Development of either the Shanbally or Marino sites will have the same positive impact on Flora and Fauna. These positive impacts relate to the improvement in the water quality of Cork Lower Harbour. No significant water courses or bodies have been identified in the vicinity of either of the two sites. It is therefore assumed that there will be no impact on freshwater ecology at either site.

Shanbally Site:

The Shanbally site consists of two large intensively managed agricultural fields. The majority of the boundary hedgerows are either immature or semi-mature and species diversity and structure is low. The loss of this habitat is considered as of only minor significance.

It is considered possible that some notable mammals, such as badger and fox, may use the boundary hedgerows for cover or setts. However, because the developable area of the site is restricted to the centre section, it should be possible to retain the vast majority of the boundary hedgerows and avoid any sensitive areas such as badger setts. The potential for negative impacts on flora and fauna arising from the development of this site is considered to be very low.

Marino Site:

This site supports a number of different habitat types. These habitats include open grassland, mature hedgerow, scrub and mature/semi-mature treelines. A small disused stone building, which may provide habitat for bat species, also exists on the site. At either end of the site there are small areas of mature deciduous woodlands.

Although, the areas of scrub, hedge and tree located within the site are not extensive, it is considered that, due to the unmanaged and established nature of these areas, they are likely to provide useful habitat for a range of mammal, bird and possibly bat species. Such species could include badger, fox, pine marten and a variety of bird species. It is also considered likely that the site is used as a corridor for mammals moving between the woodlands at either end of the site. The importance of the tree species within the site is not known at this stage. It is assumed likely that some interesting floral species could occur in the unmanaged scrub area at the northern end of the site.

In general, it is considered that development of the Marino site will have a significant potential for negative impacts on flora and fauna. Furthermore, due to the layout of the site, it would appear to be very difficult to avoid removing substantial portions of the existing habitats in order to develop the site.

2.3 Soils and Geology

No significant potential impacts are anticipated at either site.

2.4 Noise

Shanbally Site:

The closest noise sensitive locations are located approximately 300 metres from the boundaries of the Shanbally site. There are no significant noise sources adjoining this site and the existing ambient noise environment would be expected to be near typical of a rural area. In light of the considerable distance to the nearest noise sensitive receptors it is considered that it should be possible to operate the development without causing a significant noise impact at these locations. This would be subject to the implementation of recommended noise mitigation measures.

Marino Site:

There are two key factors regarding the likely noise impact at the Marino site. These are the adjoining IFI Fertiliser Plant and the residences which are located approximately 22m south of the development site.

During construction, increased noise levels will be generated at sensitive locations due to increased traffic movements. During the operational phase of the development, installed equipment will generate noise in addition to the noise levels currently generated by the IFI Fertiliser Plant adjacent to the site. Upon implementation of mitigation measures the impact of the proposed development on ambient noise should not be significant. However, in the event of concerns arising at sensitive locations more stringent noise reduction measures would have to be incorporated into the treatment plant design in order to ameliorate this potential impact.

2.5 Odours

Through the appropriate design of wastewater treatment plants and the incorporation of modern technologies, the production of odours from treatment plants can now be reduced to a minimum. However, there is still a strong public perception that municipal wastewater treatment plants are associated with odour nuisance and where good management practice is not adhered to this can be the case. However, in general the potential for odour nuisance should decrease with greater distance to the nearest sensitive receptors. In the case of the Shanbally site, the nearest sensitive receptor is approximately 300m from the site boundary, however, at the Marino site, the nearest sensitive receptor is approximately 22m from the site.

2.6 Landscape

Shanbally Site:

The Shanbally site is located on an area of exposed sloping ground which is clearly visible from the Carrigaline to Crosshaven road. The view from this road is listed as a designated scenic route in the Cork County Development Plan. A potential negative impact on this view and on the landscape of the area therefore exists at this site. However, it should be possible to mitigate the visual impact fully (in the medium term) through the use of screen planting. The landscape of the area has already been significantly altered by the construction of industrial and utility facilities in the adjoining area. Good landscape masterplanning should mitigate any impact on the landscape of the area caused by the proposed development.

Marino Site:

The landscape around the Marino site has already been altered dramatically by the adjoining IFI Fertiliser Plant. The location of the Marino site adjoining the IFI plant means that the potential impact on the landscape is reduced considerably. In addition, there is potential to use some of the existing hedge and tree lines around the site to further reduce the potential impact on the landscape.

The Marino site is currently very visible from Passage West. However, there is plenty of opportunity to mitigate the visible impact of the development on Passage West through the use of screening vegetation and general landscape masterplanning.

2.7 Archaeology

Recorded archaeological sites are located within/adjoining both sites. An enclosure site is located just outside the eastern boundary of the Shanbally site. This site appears to be mostly levelled. The levelled remains of 'Marino Farm' are located at the northern end of the Marino site.

Discussions with qualified archaeological consultants indicate that, although the presence of these archaeological sites is likely to require greater consideration of the archaeological implications of development, it is considered very unlikely that the existence of the archaeological sites would prevent development of either site.

Nonetheless, it should be noted that there is more flexibility within the Shanbally site as to where the actual plant could be located within the site boundary. This gives more scope for locating the development away from the archaeological site.

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Correspondence – Marino Point and Carrigaline East Ecology Reports

Correspondence received from Biosphere Environmental Services who completed the preliminary ecology reports at the Marino Point and Carrigaline East (Shanbally) sites.

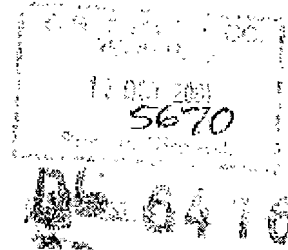
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Ms Eilish O'Boyle
E.G. Pettit & Co.
Springville House
Blackrock Road,
Cork.



16th October 2001

Re. Marino Point & Carrigaline East Ecology Reports

Dear Eilish,

Herewith the final revised copies of the reports as requested.

Re. Comparison between the two sites:

Of the two sites, I would consider that the Marino Point site has more ecological interests and conservation value than the site at Carrigaline. This is because of the greater diversity of habitats at Marino, such as treelines, scrub and stonewalls. The Carrigaline site is largely intensive agricultural land, with only minor ecological interest by way of the hedgerows.

Yours sincerely,


Brian Madden

Appendix 1C

Land-use Zoning Maps and Proposed Design Layout

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