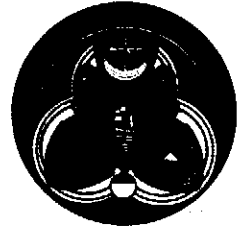


# Comhairle Contae Chorcaí Cork County Council

County Hall,  
Cork, Ireland.  
Tel: (021) 4276891 • Fax: (021) 4276321  
Web: [www.corkcoco.ie](http://www.corkcoco.ie)  
Halla an Chontae,  
Corcaigh, Éire.  
Fón: (021) 4276891 • Faics: (021) 4276321  
Suíomh Gréasáin: [www.corkcoco.ie](http://www.corkcoco.ie)



Environmental Protection Agency,  
PO Box 3000,  
Johnstown Castle Estate,  
Co. Wexford.

22<sup>nd</sup> September 2008,

**Re: Waste Water Discharge Licence Application for the Agglomeration of Cobh North, Co. Cork**

Dear Sir / Madam,

Please find enclosed Cork County Council's Waste Water Discharge Licence Application for the agglomeration of Cobh North.

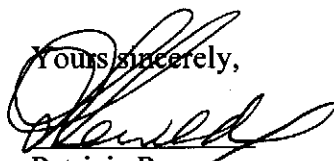
The following documentation is enclosed:

- 1 Nr. signed original in hardcopy
- 1 Nr. copy in hardcopy
- 2 Nr. CD-ROM with all documentation in electronic searchable PDF,
- 2 Nr. CD-ROM with GIS Data, Table D.2, Table E.3 and Table F.2

The content of the electronic files is a true copy of the original hardcopy.

Also enclosed is a paying order for the application fee of €25,000.

Yours sincerely,

  
Patricia Power  
Director of Services.





**Cork County Council**

**Wastewater Discharge Licence Application under  
S.I 684 of 2007 Regulations**

**Scheme/Agglomeration: North Cobh**

**Submission Date: 22<sup>nd</sup> September 2008**

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This is a draft document and is subject to revision.



# Waste Water Discharge Licence Application Form

*For inspection purposes only. Consent of copyright owner required for all other uses.*

**EPA Ref. N<sup>o</sup>:**   
*(Office use only)*

**Environmental Protection Agency**  
PO Box 3000, Johnstown Castle Estate, Co. Wexford  
Lo Call: 1890 335599 Telephone: 053-9160600 Fax: 053-9160699  
Web: [www.epa.ie](http://www.epa.ie) Email: [info@epa.ie](mailto:info@epa.ie)

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## SECTION A: NON-TECHNICAL SUMMARY

*Advice on completing this section is provided in the accompanying Guidance Note.*

A non-technical summary of the application is to be included here. The summary should identify all environmental impacts of significance associated with the discharge of waste water associated with the waste water works. This description should also indicate the hours during which the waste water works is supervised or manned and days per week of this supervision.

The following information must be included in the non-technical summary:

A description of:

- the waste water works and the activities carried out therein,
- the sources of emissions from the waste water works,
- the nature and quantities of foreseeable emissions from the waste water works into the receiving aqueous environment as well as identification of significant effects of the emissions on the environment,
- the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the waste water works,
- further measures planned to comply with the general principle of the basic obligations of the operator, i.e., that no significant pollution is caused;
- measures planned to monitor emissions into the environment.

Supporting information should form **Attachment N° A.1**

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**INTRODUCTION:**

Cobh is located in Cork Harbour on the Great Island approximately 25 miles to the East of Cork City. This application is for the discharge from the North Cobh Waste Water Treatment Plant (WWTP), which serves the agglomeration of North Cobh and is situated in an area called Ballynoe. (See **Application Form Attachment A.1 Map 1** for details). This plant is under the administrative control of Cork County Council and is operated by Electrical & Pump Services Ltd. (EPS Ltd).

Developers with un-serviced zoned development land in the North Cobh region secured the development of this WWTP under the Serviced Lands Initiative in conjunction with Cork County Council to provide the necessary infrastructure as part of their overall strategy for this part of the North West Cobh Catchment. A Design Build and Operate and Maintenance Contract was procured for an 8000 Population Equivalent (PE) WWTP to be built in 2000 PE phases to match the anticipated development that was proposed in the 2001 Cork Area Strategic Plan and the 2005 Midleton Electoral Area Draft Local Area Plan and the Cobh Town Council Development Plan.

It was decided that a 4000 PE plant be built in the initial construction phase and that the expansion to 8000 PE could be facilitated in 2000 PE increments if demand from nearby development were realised. The plant is not manned full time but is operated and maintained on a regular basis by EPS staff based nearby in Midleton. The plant received its first flows in May 2008 and has recently successfully completed its commissioning phase.

The plant was constructed as an interim measure until the Cork Lower Harbour Main Drainage Scheme WWTP at Shanbally near Ringaskiddy (Cork Lower Harbour Sewerage Scheme) is constructed. The Cork Lower Harbour Sewerage Scheme will provide collection systems and a waste water treatment facility in the Cork Lower Harbour area servicing the towns of Carrigaline, Ringaskiddy, Shanbally, Coolmore, Cobh, Monkstown/Passage West and Crosshaven with an overall PE of 80,000.

The treatment plant at North Cobh is being operated by the DBO&M Contractor at present in a Contract to run for 5 years. The option is available to further extend this contract pending the development of Cork Lower Harbour Sewerage Scheme. When the new treatment plant at Shanbally is constructed and operational it will accept flows from the North Cobh treatment plant which will in turn be decommissioned.

Flows gravitate from North Cobh to the Pumping Station which pumps flows up to the WWTP located at Ballynoe. The North Cobh (WWTP) is required to receive the wastewater pumped forward from the Pumping Station, treat it to a secondary standard and then gravitate to the outfall pipeline for discharge to the marine environment.

The WWTP is required to treat the daily loading produced by the North Cobh catchment. This load will depend on the speed of construction of new residential dwelling and associated non domestic premises with the zoned land and is estimated as having a design Population Equivalent of between 4,000 and 8,000. The Biochemical Oxygen Demand associated with this PE is defined as between 240 - 480 kg/day, while the associated Dry Weather Flow is estimated as 720 - 1,440m<sup>3</sup>/day. The wastewater treatment plant is also required to treat any waste liquids generated on-site and suitable for treatment in conjunction with municipal waste water.

The WWTP is required to provide secondary treatment for flows up to DWF, producing an effluent with the following standards:

- 5 Day Biochemical Oxygen Demand, (BOD) BOD<sub>5</sub> 25 mg/l;
- Chemical Oxygen Demand, (COD) COD 125 mg/l; and
- Suspended Solids, (SS) SS 35 mg/l.

**A DESCRIPTION OF THE WASTE WATER WORKS AND THE ACTIVITIES CARRIED OUT THEREIN:  
(SEE APPLICATION FORM ATTACHMENT A.1 DRAWING 1 FOR DETAILS)**

The North Cobh treatment plant was designed to treat a flow of 90m<sup>3</sup>/hr for a population equivalent of 4000. The design is carried out in up to 4 Phases i.e. 2000 PE for each Phase. The plant is based on Sequential Batch Reactors (SBR's). Two SBR's are utilized for Phases 1 and 2 to address the 4000 Population Equivalent. An allowance has been made with the design for the construction of an additional 2 no. SBR's so as to take treatment capacity up to a population equivalent of 8000.

Pumping Station

The pumping station accepts the raw sewage from the area network which is a completely separate foul system and therefore storm water is discharged directly to a separate outfall at Carrigaloe Cobh into the River Lee Estuary, Cork Harbour West Passage. The influent flows into the pumping station foul sump by gravity and is lifted to the inlet works by 3 no. submersible pumps via a twin rising main. The pumping station pumps up to 6DWF to the North Cobh WWTP.

Inlet Works

The inlet works contains an automatic 5mm screen. Solenoid valves control the washwater flow to the screen and the screen starts/stops automatically on a high level. In the event that the automated screen becomes blocked flows are diverted to a manual screen.



The manually raked bypass screen is provided in a bypass channel around the inlet screen. This bypass screen is constructed of galvanized steel and is of standard bar screen design with 10mm spacing between the bars. The inlet works is also provided with a section for installation of a second automatic screen which will cater for Phases 3 and 4.

#### Storm/Balance Tank

During high flows there is an overflow from the inlet works which is piped to the storm tank where it is stored for a minimum period of 2 hours (at 8000PE). During Phases 1 and 2 the storm is also operating as a balancing tank. When one of the SBR tanks is in the "fill aerate" stage, and when the pumping station pumps are not operating the storm pumps will pump the influent to the SBR tank.

Pumping will continue until stopped by any of (a) Level in both the SBR tanks reaching full level, (b) end of the fill/aerate phase in both tanks (c) storm tank level falls to cut-out level.

#### Sequence Batch Reactor (SBR) Tanks

Flows to the SBR Tanks are gravitated from the inlet works or through the storm balancing tank. The sewage is aerated in these tanks by a set of duty/standby air-blowers. It then is allowed to settle out. Clarified effluent is then decanted to the outfall for a preset time. Waste sludge is then pumped to the picket fence thickener for a preset time.

#### Picket Fence Thickener (PFT)

Sludge is pumped periodically from the bottom of the SBR tank to the PFT Tank by the Waste Activated Sludge (WAS) Pumps. Settled sludge is removed periodically from site via sludge tanker. Supernatant water is returned to the inlet works via supernatant pumps.

### **SOURCES OF EMISSIONS FROM THE WASTE WATER TREATMENT WORKS**

The pollution load for the North Cobh agglomeration arises from the following areas:

- The local population (domestic). The area which the WWTP services has been zoned primarily for residential use with a limited amount of "dry" industrial development proposed.

**NATURE AND QUANTITIES OF FORESEEABLE EMISSIONS FROM THE WASTEWATER WORKS INTO THE RECEIVING AQUEOUS ENVIRONMENT AS WELL AS IDENTIFICATION OF SIGNIFICANT EFFECTS OF THE EMISSIONS ON THE ENVIRONMENT:**

Summary of Performance Requirements:

<b>Ultimate Design Parameters</b>	<b>Section B</b>	<b>Section C</b>	<b>Section D</b>
Design Population, PE	4,000	6,000	8,000
Loading to WWTP, kgBOD <sub>5</sub> /day	240	360	480
Dry Weather Flow to WWTP, m <sup>3</sup> /day	720	1080	1,440
Peak Flow to WWTP, l/s	25	37.5	50
Treated Effluent Standards: BOD <sub>5</sub> , mg/l	25	25	25
COD, mg/l	125	125	125
SS, mg/l	35	35	35

The treated effluent is discharged to the River Lee Estuary, Cork Harbour West Passage. Cork Harbour is reputed to be the second largest natural harbour in the world and it is used extensively for recreational activities. Within the Lower Harbour area there are a number of protected conservation areas namely, Cork Harbour Special Protection Area (SPA) and a number of proposed Natural Heritage Areas (pNHA's) including:

- Monkstown Creek (site code 001979);
- Lough Beg (site code 001066);
- Whitegate Bay (site code 001084); and
- Owenboy River (site code 001990)

The West Passage of Cork Harbour is designated a sensitive water under the Urban Waste Water Treatment (Amendment) Regulations, 2004. There are no bathing areas (designated or otherwise) adjacent to the outfall; the nearest (and only) designated bathing area in Cork Harbour is at Fountainstown. A car ferry operates daily from Carrigaloe Cobh to Passage West, the discharge point for the North Cobh WWTP is located below the low tide level at a sufficient distance from the shore line so as to achieve adequate diffusion/dispersion of the effluent.

The outfall from Carrigrenan WWTP also discharges to Cork Harbour Passage West upstream of this proposed outfall. Carrigrenan WWTP treats all of the sewage arising from Cork City which has a population equivalent of 413,000 PE. The Foreshore Licence Application for the North Cobh Sewers SLI states that *"It seems reasonable to assume that if Cork Harbour West Passage can assimilate the treated effluent from a population equivalent of 413,000 then it can assimilate treated effluent from an additional 8,000 PE which is equivalent to just 1.5% of the load from Carrigrenan WWTP"*.

### Erosion

The discharge points on the diffuser are orientated such that they discharge vertically upwards. The discharge ports extend 1.0m above the sea bed level. Based on this clearance and the direction of the discharge the risk of local erosion or bed scour is minimised. The flow rate from the diffuser will be negligible relative to the volumes arising from tidal flows.

## **PROPOSED TECHNOLOGY AND OTHER TECHNIQUES FOR PREVENTING OR, WHERE THIS IS NOT POSSIBLE, REDUCING EMISSIONS FROM THE WASTE WATER WORKS:**

### **Technologies**

The WWTP at North Cobh and its associated Pumping Station are equipped with duty/standby pumps. Measures for protection and control are in place in the event of power outage or equipment failure. These measures are fully addressed in **Section C.1.**

### **Techniques**

A Performance Management System (PMS) is in place at the North Cobh Wastewater Treatment Plant which is based on the templates developed by the Water Services National Training Group (WSNTG) in conjunction with the Department of the Environment and the Local Authorities. The PMS provides a uniform approach to dealing with all relevant performance management issues including Independent Compliance Audits, Management of Change, Dispute Resolution, Public Relations, Emergency Procedures and Reporting Procedures.

The current operator is contractually obliged to perform the Operation of the WWTP in accordance with the Performance Management System (excluding the web based system, which had not been implemented at the time of tender) and to maintain the design performance capability of the existing treatment plant.

## **FURTHER MEASURES PLANNED TO COMPLY WITH THE GENERAL PRINCIPLE OF THE BASIC OBLIGATIONS OF THE OPERATOR, I.E., THAT NO SIGNIFICANT POLLUTION IS CAUSED:**

### Prevention of Pollution

The waste water treatment facility is designed so that it will not cause pollution in the environment. In particular the WWTP is designed to enable any operator of the facility to prevent pollution of the environment by any of the following potential contaminants.

- Surface water run-off
- Spillages
- Solid waste

**MEASURES PLANNED TO MONITOR EMISSIONS INTO THE ENVIRONMENT:**

The current operator has developed, using the PMS as a template, procedures and processes for sampling and analysis of the incoming raw sewage and outgoing effluent, so that analytical results are reliable, repeatable, consistent and accurate.

Sampling procedures are in accordance with EU and Irish Regulations, and in particular in accordance with the Environmental Protection Agency's (EPA) monitoring and operating requirements. All laboratory analyses are performed in accordance with the latest edition of the Standard Methods for the Examination of Water and Wastewater, published by the American Public Health Association, and the Water Pollution Control Federation or other methods of comparable accuracy.

Regular independent laboratory analysis is also undertaken to externally monitor the operator's performance. Flow proportional or time based 24 hour samples are collected at the same well defined point at the inlet and outlet of the treatment works in order to monitor compliance with the requirements. A refrigerated sampler minimizes degradation between collection and analysis. Certain heavy metal analyses are also required on an annual basis as identified in 'Code of Good Practice for Use of Biosolids in agriculture'.

The operator is responsible for developing and implementing procedures to remedy defects in his laboratory procedures where the independent checking shows variations of more than  $\pm 10\%$ .

The sampling of the statutory samples is in accordance with the following procedures: -

- All samples are representative of the appropriate stream.
- 24-hour composite, flow proportional samples are collected weekly and these are fixed, stored and handled as per standard methods. Analysis of the samples (both operator's and Employer's) are undertaken within 24 hours and reported to the Employer's Representative within 48 hours of the results being made available. Reports on the operation and maintenance of the plant are generated on a monthly basis.

The monitoring and recording of the status of all parameters appropriate to proper control and operation of the plant is carried out and documented at all stages. In the event of sample failures the operator informs Cork County Council at monthly progress meetings and in the event of serious breach of consents Cork County Council is contacted immediately.

**CONCLUSION**

The treatment plant at North Cobh is currently treating flows from the surrounding developments. Should the population increases expected in the CASP and other development plans arise, then provisions are in place for the phased expansion of the plant in line with the projected growth.

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**SECTION B: GENERAL**

Advice on completing this section is provided in the accompanying Guidance Note.

**B.1 Agglomeration Details**

**Name of Agglomeration:** North Cobh

**Applicant's Details**

**Name and Address for Correspondence**

Only application documentation submitted by the applicant and by the nominated person will be deemed to have come from the applicant.

Provide a drawing detailing the agglomeration to which the licence application relates. It should have the boundary of the agglomeration to which the licence application relates clearly marked in red ink.

<b>Name*:</b>	Cork County Council
<b>Address:</b>	Area Operations South
	Floor 5
	County Hall
	Cork
<b>Tel:</b>	021-4276891
<b>Fax:</b>	021-4276321
<b>e-mail:</b>	<a href="mailto:Corporate.affairs@corkcoco.ie">Corporate.affairs@corkcoco.ie</a>

\*This should be the name of the water services authority in whose ownership or control the waste water works is vested.

\*Where an application is being submitted on behalf of more than one water services authority the details provided in Section B.1 shall be that of the lead water services authority.

<b>Name*:</b>	Patricia Power
<b>Address:</b>	Director of Services
	Area Operations South
	Floor 5
	County Hall
	Co. Cork
<b>Tel:</b>	021- 4285304
<b>Fax:</b>	021- 4342098
<b>e-mail:</b>	<a href="mailto:Patricia.Power@corkcoco.ie">Patricia.Power@corkcoco.ie</a>

\*This should be the name of person nominated by the water services authority for the purposes of the application.

**Co-Applicant's Details**

<b>Name*:</b>	<b>Not Applicable</b>
<b>Address:</b>	
<b>Tel:</b>	
<b>Fax:</b>	
<b>e-mail:</b>	

\*This should be the name of a water services authority, other than the lead authority, where multiple authorities are the subject of a waste water discharge (authorisation) licence application.

**Design, Build & Operate Contractor Details**

<b>Name*:</b>	Electrical and Pump Services Ltd
<b>Address:</b>	Quartern town Industrial Estate
	Mallow
	Co. Cork
<b>Tel:</b>	022-31200
<b>Fax:</b>	022-21378
<b>e-mail:</b>	<a href="mailto:info@epsireland.com">info@epsireland.com</a>

\*Where a design, build & operate contract is in place for the waste water works, or any part thereof, the details of the contractor should be provided.

**Attachment B.1** should contain appropriately scaled drawings / maps ( $\leq A3$ ) of the agglomeration served by the waste water works showing the boundary clearly marked in red ink. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.2, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
	✓	

**B.2 Location of Associated Waste Water Treatment Plant(s)**

Give the location of the waste water treatment plant associated with the waste water works, if such a plant or plants exists.

<b>Name*:</b>	Madeleine Healy
<b>Address:</b>	North Cobh WWTP
	Ballynoe
	Cobh
	Co. Cork
<b>Grid ref (6E, 6N)</b>	E178403 N067420
<b>Level of Treatment</b>	Secondary Treatment
<b>Primary Telephone:</b>	021 - 4285233
<b>Fax:</b>	n/a
<b>e-mail:</b>	<a href="mailto:Madeleine.healy@corkcoco.ie">Madeleine.healy@corkcoco.ie</a>

\*This should be the name of the person responsible for the supervision of the waste water treatment plant.

**Attachment B.2** should contain appropriately scaled drawings / maps ( $\leq A3$ ) of the site boundary and overall site plan, including labelled discharge, monitoring and sampling points. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.1, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
	✓	

**B.3 Location of Primary Discharge Point**

Give the location of the primary discharge point, as defined in the Waste Water Discharge (Authorisation) Regulation, associated with the waste water works.

<b>Type of Discharge</b>	Treated Effluent from WWTP and Emergency Overflow from Pumping Station
<b>Unique Point Code</b>	SW01NCBH
<b>Location</b>	Carrigaloe, Cobh, Co. Cork
<b>Grid ref (6E, 6N)</b>	E177535 N067632

**Attachment B.3** should contain appropriately scaled drawings / maps ( $\leq A3$ ) of the discharge point, including labelled monitoring and sampling points associated with the discharge point. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing the drawings and tabular data requested in sections B.1, B.2, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
	✓	

**B.4 Location of Secondary Discharge Point(s)**

Give the location of **all** secondary discharge point(s) associated with the waste water works. Please refer to Guidance Note for information on Secondary discharge points.

<b>Type of Discharge</b>	<b>Not Applicable as emergency overflow discharges down the main outfall pipe.</b>
<b>Unique Point Code</b>	
<b>Location</b>	
<b>Grid ref (6E, 6N)</b>	

**Attachment B.4** should contain appropriately scaled drawings / maps ( $\leq A3$ ) of the discharge point(s), including labelled monitoring and sampling points associated with the discharge point(s). These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.5, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
	Not Applicable	Not Applicable



**B.5 Location of Storm Water Overflow Point(s)**

Give the location of **all** storm water overflow point(s) associated with the waste water works.

<b>Type of Discharge</b>	<b>Not Applicable as North Cobh Sewerage Catchment has a completely separate Storm Water System</b>
<b>Unique Point Code</b>	
<b>Location</b>	
<b>Grid ref (6E, 6N)</b>	

**Attachment B.5** should contain appropriately scaled drawings / maps ( $\leq A3$ ) of storm water overflow point(s) associated with the waste water works, including labelled monitoring and sampling points associated with the discharge point(s). These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, C.1, D.2, E.3 and F.2.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
	Not Applicable	Not Applicable

**B.6 Planning Authority**

Give the name of the planning authority, or authorities, in whose functional area the discharge or discharges take place or are proposed to take place.

<b>Name:</b>	Cork County Council
<b>Address:</b>	Area Operations, South Floor 5 County Hall Cork
<b>Tel:</b>	021-4276891
<b>Fax:</b>	021-4867007
<b>e-mail:</b>	planninginfo@corkcoco.ie

Planning Permission relating to the waste water works which is the subject of this application:- (tick as appropriate)

<b><i>has been obtained</i></b>	<input checked="" type="checkbox"/> *	<b><i>is being processed</i></b>	<input type="checkbox"/>
<b><i>is not yet applied for</i></b>	<input type="checkbox"/>	<b><i>is not required</i></b>	<input type="checkbox"/>

<b>Local Authority Planning File Reference N<sup>o</sup>:</b>	
---	--

\* Planning for the North Cobh WWTP SLI was submitted and granted in accordance with PART 8 for the REQUIREMENTS IN RESPECT OF SPECIFIC DEVELOPMENTS BY, ON BEHALF OF, OR IN PARTNERSHIP WITH LOCAL AUTHORITIES, in accordance with Statutory Instruments (S.I.) No. 600 of 2001, Planning and Development Regulations, 2001, Section 80(1)(d).

**Attachment B.6** should contain **the most recent** planning permission, including a copy of **all** conditions, and where an EIS was required, copies of any such EIS and any certification associated with the EIS, should also be enclosed. Where planning permission is not required for the development, provide reasons, relevant correspondence, etc.

Attachment included	Yes	No
	✓	

**B.7 Other Authorities**

B.7 (i) Shannon Free Airport Development Company (SFADCo.) area

The applicant should tick the appropriate box below to identify whether the discharge or discharges are located within the Shannon Free Airport Development Company (SFADCo.) area.

**Attachment B.7(i)** should contain details of any or all discharges located within the SFADCo. area.

Within the SFADCo Area	Yes	No
	Not Applicable	Not Applicable

B.7 (ii) Health Services Executive Region

The applicant should indicate the **Health Services Executive Region** where the discharge or discharges are or will be located.

<b>Name:</b>	Health Service Executive
<b>Address:</b>	Aras Slainte Wilton Road Cork
<b>Tel:</b>	021-4545011
<b>Fax:</b>	021-4927228
<b>e-mail:</b>	<a href="mailto:grettam.crowley@mailp.hse.ie">grettam.crowley@mailp.hse.ie</a>

B.7 (iii) Other Relevant Water Services Authorities

Regulation 13 of the Waste Water Discharge (Authorisation) Regulations, 2007 requires all applicants, not being the water services authority in whose functional area the relevant waste water discharge or discharges, to which the relevant application relates, takes place or is to take place, to notify the relevant water services authority of the said application.

<b>Name:</b>	<b>Not Applicable</b>
<b>Address:</b>	
<b>Tel:</b>	
<b>Fax:</b>	
<b>e-mail:</b>	

<b>Relevant Authority Notified</b>	<b>Yes</b>	<b>No</b>
	Not Applicable	Not Applicable

**Attachment B.7(iii)** should contain a copy of the notice issued to the relevant local authority.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
	Not Applicable	Not Applicable

**B.8 Notices and Advertisements**

Regulations 10 and 11 of the Waste Water Discharge (Authorisation) Regulations, 2007 require all applicants to advertise the application in a newspaper and by way of a site notice. See *Guidance Note*.

**Attachment B.8** should contain a copy of the site notice and an appropriately scaled drawing (≤A3) showing its location. **The original application must include the original page of the newspaper in which the advertisement was placed.** The relevant page of the newspaper containing the advertisement should be included with the original and two copies of the application.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
	✓	

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**B.9 (i) Population Equivalent of Agglomeration**

**TABLE B.9.1 POPULATION EQUIVALENT OF AGGLOMERATION**

The population equivalent (p.e.) of the agglomeration to be, or being, served by the waste water works should be provided and the period in which the population equivalent data was compiled should be indicated.

<b>Population Equivalent</b>	6000
<b>Data Compiled (Year)</b>	2008
<b>Method</b>	Compiled from Development Plans/Zoning and Planning permissions in the area.

**B.9 (ii) Pending Development**

Where planning permission has been granted for development(s), but development has not been commenced or completed to date, within the boundary of the agglomeration and this development is being, or is to be, served by the waste water works provide the following information:

- information on the calculated population equivalent (p.e.) to be contributed to the waste water works as a result of those planning permissions granted,
- the percentage of the projected p.e. to be contributed by the non-domestic activities, and
- the ability of the waste water works to accommodate this extra hydraulic and organic loading without posing an environmental risk to the receiving water habitat.

Pending Development

The Population Equivalent for the North Cobh Area was compiled from the 2003 Cork Development plan and recent planning permissions granted in the area.

Two possible scenarios were predicted; the low case Population Projection, put future the population equivalent at the end of year 5 at 4440. The high case scenario put the future population equivalent at the end of year 5 at 8035.

These projections were concerned with residential development and commercial and light industrial enterprises in the North Cobh area. Of the 144 hectares zoned within the Development Plan 16.6 hectares are allocated for commercial

and light industrial. The zoned lands associated with the North Cobh WWTP amount to 72.8 hectares of medium density residential development.

The waste water treatment plant is well positioned to treat extra or future hydraulic loads given the phased nature of its construction in line with future need. The extra organic load is not thought to pose a threat to the receiving environment as the West Passage of Cork Harbour already assimilates the treated effluent from the Carrigrenan Waste Water Treatment Plant which serves the population of Cork City with a PE in the region of 413,000.

**Table B.9 (ii) (a)** overleaf provides details of planning permissions granted in the catchment of the WWTP. Current population connection to the network is approximately 850p.e which corresponds to approximately 293 dwellings at an occupancy of 2.9 persons. Un-built permissions within the agglomeration served by the WWTP amounts to a p.e of approximately 2288 which brings the p.e to 3,138. The treatment plant is currently constructed to cater for a p.e of 4000.

The housing strategy for North Cobh states that on zoned lands 20% of new residential development must be reserved for social and affordable housing, some of these developments will be served by the WWTP.

Zoned lands remains undeveloped within the catchment of the WWTP. Provision has been made in the design of the WWTP to cater for projected future development by means of phased expansion of the plant up to a p.e of 8000. It is expected, given recent trends in construction, that the p.e of the plant will not exceed 6000 over the period of the WWD Licence.

**Table B.9 (ii) (a)**

	<b>Planning File No.</b>	<b>Applicant</b>	<b>No. of dwellings</b>
R-10	04/1399	McInerney Construction	5
R-11	04/6296	McInerney Construction	23
R-10	04/6297 & 08/5240	McInerney Construction	228 & 21 No. Serviced Sites
R-11	05/1425	Alan Bardsley	36
R-12	05/2345	John Fleming Construction	280 & Creche
R-02	05/3848	Paul Montgomery	169
R-03	05/6541	J.J & Mary Frahill	243 & 6 No. Serviced Sites
R-11	05/7330	Joe Coughlan	7
R-11	05/7331	Joe Coughlan	16
R-13	07/6169	Alan Bardsley	48
<b>TOTAL</b>			<b>1055 &amp; 27 Serviced Sites</b>

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Start up Flows at Completion of WWTP – High Case

Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3 DWF l/s	6 DWF l/s	Formula A l/s
R02 (Houses) -Montgomery		40	2.9	116	0.24	0.73	1.45	2.07
R03 (Houses) - Grady O'Mahony		40	2.9	116	0.24	0.73	1.45	2.07
R04 (Houses) - Downgrad.			2.9				0.00	0.00
R05 (Houses) - Downgrad.			2.9				0.00	0.00
R09 (Houses) - Ballynoe Dev. Council			2.9	0	0.00	0.00	0.00	0.00
R10 (Houses) - McInerney		235	2.9	682	1.42	4.26	8.52	12.15
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55
R12 (Houses) - Fleming		50	2.9	145	0.30	0.91	1.81	2.58
R13 (Area) - A. Bardsley		24	2.9	70	0.15	0.44	0.87	1.24
R14 (Area) - East Cobh			102	0	0.00	0.00	0.00	0.00
I01 - Treat. Plant			14m3/ha-d	0	0.00	0.00	0.00	0.00
CASP Area			102					
Nr of existing houses		30	2.9	87	0.18	0.54	1.09	1.55
<b>Sub Total</b>				<b>1302</b>	<b>2.71</b>	<b>8.14</b>	<b>16.28</b>	<b>23.21</b>
Storm Sewer from 84 existing houses (30*50m2/h of 2 year intensity)						8.63	8.63	
<b>Grand Total</b>						<b>16.77</b>	<b>24.91</b>	
Flows at end of Year 1 – High Case								
Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3 DWF l/s	6 DWF l/s	Formula A l/s
R02 (Houses) -Montgomery		90	2.9	261	0.54	1.63	3.26	4.65
R03 (Houses) - Grady O'Mahony		90	2.9	261	0.54	1.63	3.26	4.65
R04 (Houses) - Downgrad.			2.9					0.00
R05 (Houses) - Downgrad.			2.9					0.00
R09 (Houses) - Ballynoe Dev. Council		50	2.9	145	0.30	0.91	1.81	2.58
R10 (Houses) - McInerney		290	2.9	841	1.75	5.26	10.51	14.99
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55
R12 (Houses) - Fleming		100	2.9	290	0.60	1.81	3.63	5.17
R13 (Area) - A. Bardsley		36	2.9	104	0.22	0.65	1.31	1.86
R14 (Area) - East Cobh			102	0	0.00	0.00	0.00	0.00
I01 - Treat. Plant			14m3/ha-d	0	0.00	0.00	0.00	0.00
CASP Area			102					
Nr of existing houses		40	2.9	116	0.24	0.73	1.45	2.07
<b>Sub Total</b>				<b>2105</b>	<b>4.39</b>	<b>13.16</b>	<b>26.32</b>	<b>37.53</b>
Storm Sewer from 40 existing houses (40*50m2/h of 2 year intensity)						11.51	11.51	
<b>Grand Total</b>						<b>24.67</b>	<b>37.83</b>	

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Flows at end of Year 2 – High Case								
Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3 DWF l/s	6 DWF l/s	Formula A l/s
R02 (Houses) -Montgomery		140	2.9	406	0.85	2.54	5.08	7.24
R03 (Houses) - Grady O'Mahony		140	2.9	406	0.85	2.54	5.08	7.24
R04 (Houses) - Downgrad.			2.9					0.00
R05 (Houses) - Downgrad.			2.9					0.00
R09 (Houses) - Ballynoe Dev. Council		100	2.9	290	0.60	1.81	3.63	5.17
R10 (Houses) - McInerney		350	2.9	1015	2.11	6.34	12.69	18.09
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55
R12 (Houses) - Fleming		150	2.9	435	0.91	2.72	5.44	7.75
R13 (Area) - A. Bardsley		36	2.9	104	0.22	0.65	1.31	1.86
R14 (Area) - East Cobh	0.5		102	51	0.11	0.32	0.64	0.91
I01 - Treat. Plant			14m3/ha-d	0	0.00	0.00	0.00	0.00
CASP Area			102					0.00
Nr of existing houses		84	2.9	244	0.51	1.52	3.05	4.34
<b>Sub Total</b>				<b>3039</b>	<b>6.33</b>	<b>18.99</b>	<b>37.98</b>	<b>54.15</b>
Storm Sewer from 84 existing houses (84*50m2/h of 2 year intensity)						24.18	24.18	
<b>Grand Total</b>						<b>43.17</b>	<b>62.16</b>	
Flows at end of Year 3 – High Case								
Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3 DWF l/s	6 DWF l/s	Formula A l/s
R02 (Houses) -Montgomery		170	2.9	493	1.03	3.08	6.16	8.79
R03 (Houses) - Grady O'Mahony		200	2.9	580	1.21	3.63	7.25	10.34
R04 (Houses) - Downgrad.			2.9				0.00	0.00
R05 (Houses) - Downgrad.			2.9				0.00	0.00
R09 (Houses) - Ballynoe Dev. Council		165	2.9	479	1.00	2.99	5.98	8.53
R10 (Houses) - McInerney		420	2.9	1218	2.54	7.61	15.23	21.71
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55
R12 (Houses) - Fleming		200	2.9	580	1.21	3.63	7.25	10.34
R13 (Area) - A. Bardsley		36	2.9	104	0.22	0.65	1.31	1.86
R14 (Area) - East Cobh	1.5		102	153	0.32	0.96	1.91	2.73
I01 - Treat. Plant	1		14m3/ha-d	78	0.16	0.49	0.97	1.39
CASP Area			102				0.00	0.00
Nr of existing houses		84	2.9	244	0.51	1.52	3.05	4.34
<b>Sub Total</b>				<b>4015</b>	<b>8.37</b>	<b>25.10</b>	<b>50.19</b>	<b>71.57</b>
Storm Sewer from 84 existing houses (84*50m2/h of 2 year intensity)						24.18	24.18	
<b>Grand Total</b>						<b>49.28</b>	<b>74.37</b>	



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Flows at end of Year 4 – High Case									
Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3 DWF l/s	6 DWF l/s	Formula A l/s	
R02 (Houses) -Montgomery		170	2.9	493	1.03	3.08	6.16	8.79	
R03 (Houses) - Grady O'Mahony		258	2.9	748	1.56	4.68	9.35	13.34	
R04 (Houses) - Downgrad.			2.9					0.00	
R05 (Houses) - Downgrad.			2.9					0.00	
R09 (Houses) - Ballynoe Dev. Council		192	2.9	557	1.16	3.48	6.96	9.92	
R10 (Houses) - McInerney		480	2.9	1392	2.90	8.70	17.40	24.81	
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55	
R12 (Houses) - Fleming		260	2.9	754	1.57	4.71	9.43	13.44	
R13 (Area) - A. Bardsley		36	2.9	104	0.22	0.65	1.31	1.86	
R14 (Area) - East Cobh	4		102	408	0.85	2.55	5.10	7.27	
I01 - Treat. Plant	6.5		14m3/ha-d	506	1.05	3.16	6.32	9.01	
CASP Area	7		102	714	1.49	4.46	8.93	12.73	
Nr of existing houses		84	2.9	244	0.51	1.52	3.05	4.34	
<b>Sub Total</b>					<b>6007</b>	<b>12.51</b>	<b>37.54</b>	<b>75.08</b>	<b>107.06</b>
Storm Sewer from 84 existing houses (84*50m2/h of 2 year intensity)							24.18	24.18	
<b>Grand Total</b>							<b>61.72</b>	<b>99.26</b>	
Flows at end of Year 5 – High Case									
Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3 DWF l/s	6 DWF l/s	Formula A l/s	
R02 (Houses) -Montgomery		170	2.9	493	1.03	3.08	6.16	8.79	
R03 (Houses) - Grady O'Mahony		258	2.9	748	1.56	4.68	9.35	13.34	
R04 (Houses) - Downgrad.			2.9					0.00	
R05 (Houses) - Downgrad.			2.9					0.00	
R09 (Houses) - Ballynoe Dev. Council		192	2.9	557	1.16	3.48	6.96	9.92	
R10 (Houses) - McInerney		520	2.9	1508	3.14	9.43	18.85	26.88	
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55	
R12 (Houses) - Fleming		276	2.9	800	1.67	5.00	10.01	14.27	
R13 (Area) - A. Bardsley		36	2.9	104	0.22	0.65	1.31	1.86	
R14 (Area) - East Cobh	7		102	714	1.49	4.46	8.93	12.73	
I01 - Treat. Plant	11.48		14m3/ha-d	893	1.86	5.58	11.16	15.91	
CASP Area	18.5		102	1887	3.93	11.79	23.59	33.63	
Nr of existing houses		84	2.9	244	0.51	1.52	3.05	4.34	
<b>Sub Total</b>					<b>8035</b>	<b>16.74</b>	<b>50.22</b>	<b>100.44</b>	<b>143.22</b>
Storm Sewer from 84 existing houses (84*50m2/h of 2 year intensity)							24.18	24.18	
<b>Grand Total</b>							<b>74.40</b>	<b>124.62</b>	

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Start up Flows at Completion of WWTP – Low Case

Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3DWF l/s	6 DWF l/s	Formula A l/s
R02 (Houses) -Montgomery		5	2.9	15	0.03	0.09	0.18	0.26
R03 (Houses) - Grady O'Mahony		5	2.9	15	0.03	0.09	0.18	0.26
R04 (Houses) - Downgrad.			2.9					
R05 (Houses) - Downgrad.			2.9					
R09 (Houses) - Ballynoe Dev. Council			2.9	0	0.00	0.00	0.00	0.00
R10 (Houses) - McInerney		235	2.9	682	1.42	4.26	8.52	12.15
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55
R12 (Houses) - Fleming		50	2.9	145	0.30	0.91	1.81	2.58
R13 (Area) - A. Bardsley		24	2.9	70	0.15	0.44	0.87	1.24
R14 (Area) - East Cobh			102	0	0.00	0.00	0.00	0.00
I01 - Treat. Plant			14m3/ha-d	0	0.00	0.00	0.00	0.00
CASP Area			102					
Nr of existing houses			2.9	0	0.00	0.00	0.00	0.00
<b>Sub Total</b>				<b>1012</b>	<b>2.11</b>	<b>6.33</b>	<b>12.65</b>	<b>18.04</b>
<b>Grand Total</b>						<b>6.33</b>	<b>12.65</b>	

Flows at end of Year 1 – Low Case

Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3DWF l/s	6 DWF l/s	Formula A l/s
R02 (Houses) -Montgomery		50	2.9	145	0.30	0.91	1.81	2.58
R03 (Houses) - Grady O'Mahony		50	2.9	145	0.30	0.91	1.81	2.58
R04 (Houses) - Downgrad.			2.9					
R05 (Houses) - Downgrad.			2.9					
R09 (Houses) - Ballynoe Dev. Council			2.9	0	0.00	0.00	0.00	0.00
R10 (Houses) - McInerney		285	2.9	827	1.72	5.17	10.33	14.73
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55
R12 (Houses) - Fleming		100	2.9	290	0.60	1.81	3.63	5.17
R13 (Area) - A. Bardsley		36	2.9	104	0.22	0.65	1.31	1.86
R14 (Area) - East Cobh			102	0	0.00	0.00	0.00	0.00
I01 - Treat. Plant			14m3/ha-d	0	0.00	0.00	0.00	0.00
CASP Area			102					
Nr of existing houses			2.9	0	0.00	0.00	0.00	0.00
<b>Sub Total</b>				<b>1598</b>	<b>3.33</b>	<b>9.99</b>	<b>19.97</b>	<b>28.48</b>
<b>Grand Total</b>						<b>9.99</b>	<b>19.97</b>	

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Flows at end of Year 2 – Low Case

Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3DWF l/s	6 DWF l/s	Formula A l/s
R02 (Houses) -Montgomery		100	2.9	290	0.60	1.81	3.63	5.17
R03 (Houses) - Grady O'Mahony		100	2.9	290	0.60	1.81	3.63	5.17
R04 (Houses) - Downgrad.			2.9					
R05 (Houses) - Downgrad.			2.9					
R09 (Houses) - Ballynoe Dev. Council		50	2.9	145	0.30	0.91	1.81	2.58
R10 (Houses) - McInerney		335	2.9	972	2.02	6.07	12.14	17.32
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55
R12 (Houses) - Fleming		150	2.9	435	0.91	2.72	5.44	7.75
R13 (Area) - A. Bardsley		36	2.9	104	0.22	0.65	1.31	1.86
R14 (Area) - East Cobh			102	0	0.00	0.00	0.00	0.00
I01 - Treat. Plant			14m3/ha-d	0	0.00	0.00	0.00	0.00
CASP Area			102					
Nr of existing houses		20	2.9	58	0.12	0.36	0.73	1.03
<b>Sub Total</b>				<b>2381</b>	<b>4.96</b>	<b>14.88</b>	<b>29.76</b>	<b>42.44</b>
Storm Sewer from 20 existing houses (20*50m2/h of 2 year intensity)						5.75	5.75	
<b>Grand Total</b>						<b>20.63</b>	<b>35.51</b>	

Flows at end of Year 3 – Low Case

Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3DWF l/s	6 DWF l/s	Formula A l/s
R02 (Houses) -Montgomery		150	2.9	435	0.91	2.72	5.44	7.75
R03 (Houses) - Grady O'Mahony		150	2.9	435	0.91	2.72	5.44	7.75
R04 (Houses) - Downgrad.			2.9					
R05 (Houses) - Downgrad.			2.9					
R09 (Houses) - Ballynoe Dev. Council		100	2.9	290	0.60	1.81	3.63	5.17
R10 (Houses) - McInerney		385	2.9	1117	2.33	6.98	13.96	19.90
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55
R12 (Houses) - Fleming		200	2.9	580	1.21	3.63	7.25	10.34
R13 (Area) - A. Bardsley		36	2.9	104	0.22	0.65	1.31	1.86
R14 (Area) - East Cobh			102	0	0.00	0.00	0.00	0.00
I01 - Treat. Plant			14m3/ha-d	0	0.00	0.00	0.00	0.00
CASP Area			102					
Nr of existing houses		40	2.9	116	0.24	0.73	1.45	2.07
<b>Sub Total</b>				<b>3164</b>	<b>6.59</b>	<b>19.77</b>	<b>39.55</b>	<b>56.39</b>
Storm Sewer from 40 existing houses (40*50m2/h of 2 year intensity)						11.79	11.79	
<b>Grand Total</b>						<b>31.56</b>	<b>51.34</b>	

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Flows at end of Year 4 – Low Case

Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3DWF l/s	6 DWF l/s	Formula A l/s
R02 (Houses) -Montgomery		170	2.9	493	1.03	3.08	6.16	8.79
R03 (Houses) - Grady O'Mahony		200	2.9	580	1.21	3.63	7.25	10.34
R04 (Houses) - Downgrad.			2.9					
R05 (Houses) - Downgrad.			2.9					
R09 (Houses) - Ballynoe Dev. Council		150	2.9	435	0.91	2.72	5.44	7.75
R10 (Houses) - McInerney		435	2.9	1262	2.63	7.88	15.77	22.49
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55
R12 (Houses) - Fleming		250	2.9	725	1.51	4.53	9.06	12.92
R13 (Area) - A. Bardsley		36	2.9	104	0.22	0.65	1.31	1.86
R14 (Area) - East Cobh			102	0	0.00	0.00	0.00	0.00
I01 - Treat. Plant			14m3/ha-d	0	0.00	0.00	0.00	0.00
CASP Area			102					
Nr of existing houses		60	2.9	174	0.36	1.09	2.18	3.10
<b>Sub Total</b>				<b>3860</b>	<b>8.04</b>	<b>24.12</b>	<b>48.25</b>	<b>68.80</b>
Storm Sewer from 60 existing houses (60*50m2/h of 2 year intensity)						17.69	17.69	
<b>Grand Total</b>						<b>41.81</b>	<b>65.94</b>	

Flows at end of Year 5 – Low Case

Catchment Zone	Area Ha	No. of Houses	PE/ha or PE/house	PE No.	DWF l/s	3DWF l/s	6 DWF l/s	Formula A l/s
R02 (Houses) -Montgomery		170	2.9	493	1.03	3.08	6.16	8.79
R03 (Houses) - Grady O'Mahony		258	2.9	748	1.56	4.68	9.35	13.34
R04 (Houses) - Downgrad.			2.9					
R05 (Houses) - Downgrad.			2.9					
R09 (Houses) - Ballynoe Dev. Council		192	2.9	557	1.16	3.48	6.96	9.92
R10 (Houses) - McInerney		485	2.9	1407	2.93	8.79	17.58	25.07
R11 (Houses) - McInerney		30	2.9	87	0.18	0.54	1.09	1.55
R12 (Houses) - Fleming		276	2.9	800	1.67	5.00	10.01	14.27
R13 (Area) - A. Bardsley		36	2.9	104	0.22	0.65	1.31	1.86
R14 (Area) - East Cobh			102	0	0.00	0.00	0.00	0.00
I01 - Treat. Plant			14m3/ha-d	0	0.00	0.00	0.00	0.00
CASP Area			102					
Nr of existing houses		84	2.9	244	0.51	1.52	3.05	4.34
<b>Sub Total</b>				<b>4440</b>	<b>9.25</b>	<b>27.75</b>	<b>55.50</b>	<b>79.14</b>
Storm Sewer from 84 existing houses (84*50m2/h of 2 year intensity)						24.18	24.18	
<b>Grand Total</b>						<b>51.93</b>	<b>79.68</b>	

**B.9 (iii) FEES**

State the relevant Class of waste water discharge as per Column 1 of the Second Schedule, and the appropriate fee as per Columns 2 or 3 of the Third Schedule of the Waste Water Discharges (Authorisation) Regulations 2007, S.I. No. 684 of 2007.

Class of waste water discharge	Fee (in €)
	€25,000

Appropriate Fee Included	Yes	No
	✓	

**B.10 Capital Investment Programme**

State whether a programme of works has been prioritised for the development of infrastructure to appropriately collect, convey, treat and discharge waste water from the relevant agglomeration. If a programme of works has been prioritised provide details on funding, (local or national), allocated to the capital project. Provide details on the extent and type of work to be undertaken and the likely timeframes for this work to be completed.

**Attachment B.10** should contain the most recent development programme, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	✓	

The Preliminary Report has been completed for the Cork Lower Harbour Sewerage Scheme. The EIS has been completed and is currently with An Bord Pleanála.

**B.11 Significant Correspondence**

Provide a summary of any correspondence resulting from a Section 63 notice issued by the Agency in relation to the waste water works under the Environmental Protection Agency Acts, 1992 and 2003, as amended by Section 13 of Protection of the Environment Act, 2003.

**Attachment B.11** should contain a summary of any relevant correspondence issued in relation to a Section 63 notice.

Attachment included	Yes	No
	Not Applicable	Not Applicable

**B.12 Foreshore Act Licences.**

Provide a copy of the most recent Foreshore Act licence issued in relation to discharges from the waste water works issued under the Foreshore Act 1933.

**Attachment B.12** should contain the most recent licence issued under the Forshore Act 1933, including a copy of **all** conditions attached to the licence and any monitoring returns for the previous 12-month period, if applicable.

Attachment included	Yes	No
	✓	

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**SECTION C: INFRASTRUCTURE & OPERATION**

Advice on completing this section is provided in the accompanying Guidance Note.

**C.1 Operational Information Requirements**

Provide a description of the plant, process and design capacity for the areas of the waste water works where discharges occur, to include a copy of such plans, drawings or maps, (site plans and location maps, process flow diagrams), and such other particulars, reports and supporting documentation as are necessary to describe all aspects of the area of the waste water works discharging to the aquatic environment. Maps and drawings must be no larger than A3 size.

**C.1.1 Storm Water Overflows**

For each storm water overflow within the waste water works the following information shall be submitted:

- An assessment to determine compliance with the criteria for storm water overflows, as set out in the DoEHLG 'Procedures and Criteria in Relation to Storm Water Overflows', 1995 and any other guidance as may be specified by the Agency, and
- Identify whether any of the storm water overflows are to be decommissioned, and identify a date by which these overflows will cease, if applicable.

**C.1.2 Pumping Stations**

For each pump station operating within the waste water works, provide details of the following:

- Number of duty and standby pumps at each pump station;
- The measures taken in the event of power failure;
- Details of storage capacity at each pump station;
- Frequency and duration of activation of emergency overflow to receiving waters. Clarify the location where such discharges enter the receiving waters.

**Attachment C.1** should contain supporting documentation with regard to the plant and process capacity, systems, storm water overflows, emergency overflows, etc., including flow diagrams of each with any relevant additional information. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, D.2, E.3 and F.2.

Attachment included	Yes	No
	✓	

**C.2 Outfall Design and Construction**

Provide details on the primary discharge point & secondary discharge points and storm overflows to include reference, location, design criteria and construction detail.

**Attachment C.2** should contain any supporting documentation on the design and construction of any and all discharge outfalls, including stormwater overflows, from the waste water works.

Attachment included	Yes	No
	✓	

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## C.1 Operational Information Requirements

The North Cobh treatment plant was designed to treat a flow of 90m<sup>3</sup>/hr for a population equivalent of 4000. The design is carried out in up to 4 Phases i.e. 2000 PE for each Phase. The plant is based on Sequential Batch Reactors (SBR's). Two SBR's are utilized for Phases 1 and 2 to address the 4000 Population Equivalent. An allowance has been made with the design for the construction of an additional 2 no. SBR's so as to take treatment capacity up to a population equivalent of 8000. (See Application Form Attachment C.1 Drawing No's. 1 & 2).

**(See Application Form Attachment C.1 Drawing No's. 3, 4, 5 & 6 for details on the following section).**

### Inlet Works

#### Introduction

The influent entering from the Pumping Station enters the inlet automatic screen **IS001**.

#### Process

The Inlet Works is fitted with an automatic 5mm inlet screen. If required due to blockage of the automatic screen, flow can be diverted to a manual screen by closing the handstops at the automatic screen channel and opening the manual screen handstops. The handstops on the manual screen will act as a weir in the event of the automatic screen failing. A manually raked bypass screen is also provided in a bypass channel around the inlet screen. This bypass screen is constructed of galvanized steel and is of standard bar screen design with 10mm spacing between the bars. The inlet works is also designed to accommodate a future second automatic screen which will be required for phases 3 and 4.

The screen starts automatically when the inlet pumps start or when the level reaches a preset level. When the screen runs, washwater solenoids **SV002** and **SV003** open. When the level falls below a preset value or the inlet pumps stop, the screen stops. The solenoid valves remain open for 1 minute following screen shutdown and then close. The solenoid valve operation will be to open for 1 minute then close for 1 min repeating this during the operation of the screen. Screenings pass from the screen via a chute into a wheelie bin for disposal.

#### Protection and Control

- The screen motor is fitted with overload protection.

- An emergency-stop push button is located adjacent to the screen. Operation of the E-Stop will stop the motor and generate an alarm. Reset is via MCC push button.
- The screen will have Hand/Off/Auto control. In hand, overload protection will be provided.
- Failure of the 4-20mA Ultrasonic signal causes the solenoid to open and the screen to run continuously. An alarm is generated.
- In the event of a power loss in the Main Plant the pumping station pumps are inhibited.
- High-high level detected by **US002** will generate an alarm and a text is sent to the operator.

#### Inlet Sampling and Monitoring

Influent to the inlet works is sampled at Sampler Point **SP001** by an automatic sampler. Sample command is only initiated on detection of inlet flows.

#### Storm/Balance Tank

##### Introduction

During high flows to the inlet works influent overflows into the storm tank where it is stored. The storm tanks are also to be used as a balancing tank during phase 1 and 2. When one of the SBR tanks is in the "fill aerate" stage, and when the pumping station pumps are not operating the storm pumps (**SW001 OR SW002**) will pump the influent to the SBR Tank. Flowmeter **FM005** records the flow to the SBR tanks. In the event of a high level in the storm/balance tank, U/S level (**US003**) will inhibit the pumping station pumps and will send an alarm to the SCADA.

##### Process

Overflow from the inlet works enters the storm tank by gravity. When one of the SBR tanks is in its "fill aerate" phase the duty storm pump will start and pump into the SBR tank provided that no pumping station pump is running. Pumping will continue until stopped by any of (a) Level in both the SBR tanks reaching full level, (b) end of the fill/aerate phase in both tanks (c) storm tank level falls to cut-out level. Low level control in the storm tank is via Ultrasonic **US003**. Storm Tank Cleaning Unit (**VP001**) is controlled by Ultrasonic **US003** and operates on a duty basis by circulating the storm water from the bottom of

the tank into the ejector nozzle which prevents settlement and build up of sludge in the storm tank.

#### Motor Protection and Control

- The pumps are fitted with overload and thermal protection.
- If the duty pump trips, the standby pump will start automatically. A pump trip will generate an alarm.
- Each storm pump has an Emergency-stop pushbutton located adjacent to the pump sump. Operation of the E-Stop will stop the motor and generate an alarm to the PLC. Reset will be via MCC pushbutton.
- The pumps have Hand/Off/Auto control. In hand, the following protection will be provided. Overload and low low level cut-out via a hardwired relay in the ultrasonic.
- High-high level detected by **US003** generates an alarm and a text will be sent to the operator.

#### Sequence Batch Reactor (SBR) Tanks

##### Introduction

Flows to the SBR Tanks are restricted to 25l/s. Flowmeter **FM005** will monitor the flows to the SBR's.

The sewage is aerated in these tanks by a set of duty/standby by air-blowers. It then is allowed to settle out. Clarified water is then decanted to outfall for a preset time. Waste sludge is then pumped to the picket fence thickener for a preset time.

##### Process

#### **Fill/ Aeration**

The influent gravitates into the aeration tanks from the inlet screen via open actuated valves **AV001 or AV002**, depending on which tank is in the "fill/aerate" stage. After a pre-determined time, the duty air blower (**AB001 or AB002**) starts. Only one of the tanks will aerate at any time. The actuated valves **AV003 and AV004** control which tanks are supplied by the blowers. Effluent will continue to flow into the tank until the fill time has elapsed or the tank reaches its full level as detected by either **US004 or US005**. When this

happens, valves **AV001 or AV002** closes. The tank will continue to aerate for a preset time period.

Two Variable Speed Drive (VSD) blowers **AB001 and AB002**, in a duty/standby configuration are provided. Speed control of the Air blowers VSD is by means of a PID loop from dissolved oxygen probe **DO001 or DO002** in the SBR tanks. The blower speeds up or slows down to maintain a preset DO level in the SBR. A local/remote switch is fitted to each drive. In remote this provides the air blowers with a 4-20mA signal which increases or decreases the speed of the blowers depending on the levels of DO required. In local a potentiometer is mounted on each blower starter section in the MCC panel to control the blowers in manual. Each blower motor will run at a set minimum speed to ensure proper ventilation of the unit. The air blower enclosures are each fitted with an acoustic hood and 2 no. cooling fans.

Pressure transducer **PT001** monitors the pressure in the air pipeline. If both SBR tanks are full, influent from the inlet screen gravitates to the storm holding tank.

#### Fit-Out

The floors of the SBR Tanks are fitted with a piped air diffuser system. The air is supplied from a pair of VSD controlled air-blower units (**AB001 & AB002**) arranged in a duty/standby configuration. The blower units also each contain sound attenuation baffles and non-return valves. Dissolved Oxygen probes (**DO001 & DO002**) are fitted to the tanks to monitor and control the process.

#### **Settlement Phase**

When the fill phase time period has elapsed, aeration continues for a timed period. Following this the blower stops and the settlement period commences. This cycle continues for a set time period.

#### **Decanting Phase**

When the settlement stage is finished the decanting stage commences. The Winch **WH001 or WH002** (depending on which SBR tank is in the decanting stage) on the decanting arms lower and the final effluent is decanted to the outfall pipe. The winch remains lowered until either **US004 or US005** detects a pre-determined low level or until a timed period is achieved. Floating buoys control the travel of the decant arm which prevents sludge being decanted to outfall in the event of the decant process not ending in time. At the start of the decant cycle, winches **WH001 or WH002** lift and the cycle will restart.

**Wasting Phase**

During the settlement phase time period, sludge is withdrawn from the SBR and pumped into the picket fence thickener by a pair of WAS pumps in each SBR tanks **WAS001, WAS002, WAS003 & WAS004**. Pumps operate on a time sequence. If a high level is detected in the Picket Fence Thickener the WAS pumps will be inhibited.

Monitor Protection & Control

- The pumps are fitted with overload and thermistor over-temperature protection.
- The ventilation fans are fitted with over load protection.
- Start/Stop control of the blowers is via the start control of the ventilation fan i.e. the blower starts and stops via an auxiliary contact on the Vent Fan Contactor. This prevents an unvented blower running.
- If the duty blower trips the standby blower starts automatically. A trip generates an alarm to the PLC.
- Each blower has an Emergency-stop pushbutton located adjacent to the acoustic hood. Operation of the E-stop stops the fan and blower motor and generates an alarm to the PLC. Reset is via MCC pushbutton.
- The blower has Hand/Off/Auto control. In hand the blower runs at a preset fixed speed.
- The blower motors are fitted with cooling fans interlocked with the motor run contractor.

**Typical SBR Sequence. Times are adjustable and dependant on plant loadings**

<b>SBR Tank No. 1</b>		<b>SBR Tank No. 2</b>	
Stage	Time (Hrs)	Stage	Time (Hrs)
Fill & Aeration (1 <sup>st</sup> hr Fill only)	6	Settlement	3
Aeration Only	1	Decant (Last 30 mins waste)	2
Settlement	3	Fill & Aeration (1 <sup>st</sup> hr Fill only)	6
Decant (Last 30 mins waste)	2	Aeration Only	1

**All the above times to be adjustable through the HMI**

Before changeover of blowers from one tank to the other, an open signal must be received from the actuated valve on that line.

## **Waste Sludge (WAS)**

### Introduction

Sludge from the SBR Tank is pumped to the PFT during the WAS cycle.

### Fit-Out

Each tank is fitted with two pumps arranged in duty/standby configuration, **WAS001, WAS002, WAS003 & WAS004.**

### Process

The pumps run for a certain period of time each day during the batching cycle to pump sludge to the Picket Fence Thickener. When required, the WAS cycle occurs during the end of the decant phase. Dry run protection is provided by a hardwired relay on ultrasonics **US004 & US005.**

### Motor Protection and Control

- The WAS pumps is fitted with overload protection
- An Emergency-stop pushbutton is located adjacent to the tank edge. Operation of the E-Stop stops the motor and generates an alarm. Reset is via MCC pushbutton.
- The pumps have Hand/Off/Auto control. In hand, the following protection will be provided: Overload.
- A high level in the supernatant tank inhibits the Waste stage of the SBR sequence

## **Picket Fence Thickener (PFT)**

### Introduction

Sludge is pumped periodically from the bottom of the SBR tank to the PFT Tank by the WAS Pumps **WAS001, WAS002, WAS003 & WAS004.**

Settled sludge is removed periodically from site via tanker. Supernatant water is returned to the inlet works via supernatant pumps.

### Fit-Out

The PFT is fitted with a rotating picket fence gate. Supernatant water is allowed to run out of the tank via a V-notched weir to the supernatant sump.

### Process

The PFT gate turns continuously- switched on/off via manual control and the MCC.

### Protection and Control

The PFT drive motor (M017) is fitted with overload protection.

## **Supernatant Sump**

### Introduction

The Supernatant Sump collects runoff from the PFT. The water flows into the Sump by gravity and is lifted to the Inlet Works by a pair of submersible pumps.

### Process

The ultrasonic **US006** provides an analogue 4-20mA signal to the PLC. When the level in the sump rises to a preset cut-in level, the duty pump, **M018** or **M019** starts. The duty pump runs until the liquid level reaches pump cut-out level.

### Protection and Control

- The pumps are fitted with overload protection.
- If the duty pump trips, the standby pump will start automatically. A pump trip generates an alarm.
- Each pump has an Emergency-stop pushbutton located adjacent to the pump sump. Operation of the E-stop stops the motor and generates an alarm. Reset is via MCC push button.
- Failure of the 4-20mA Ultrasonic signal inhibits the pumps and generates an alarm.
- The pumps have Hand/Off/Auto control. In hand the following protection is provided: overload and low-low level cut-out. Low-low control is via hardwired relay on Ultrasonic **US006**.
- A high level in the supernatant tank inhibits the Waste stage of the SBR sequence.
- High-high level detected by **US006** generates an alarm and a text is sent to the operator.

Outfall Sampling & Monitoring

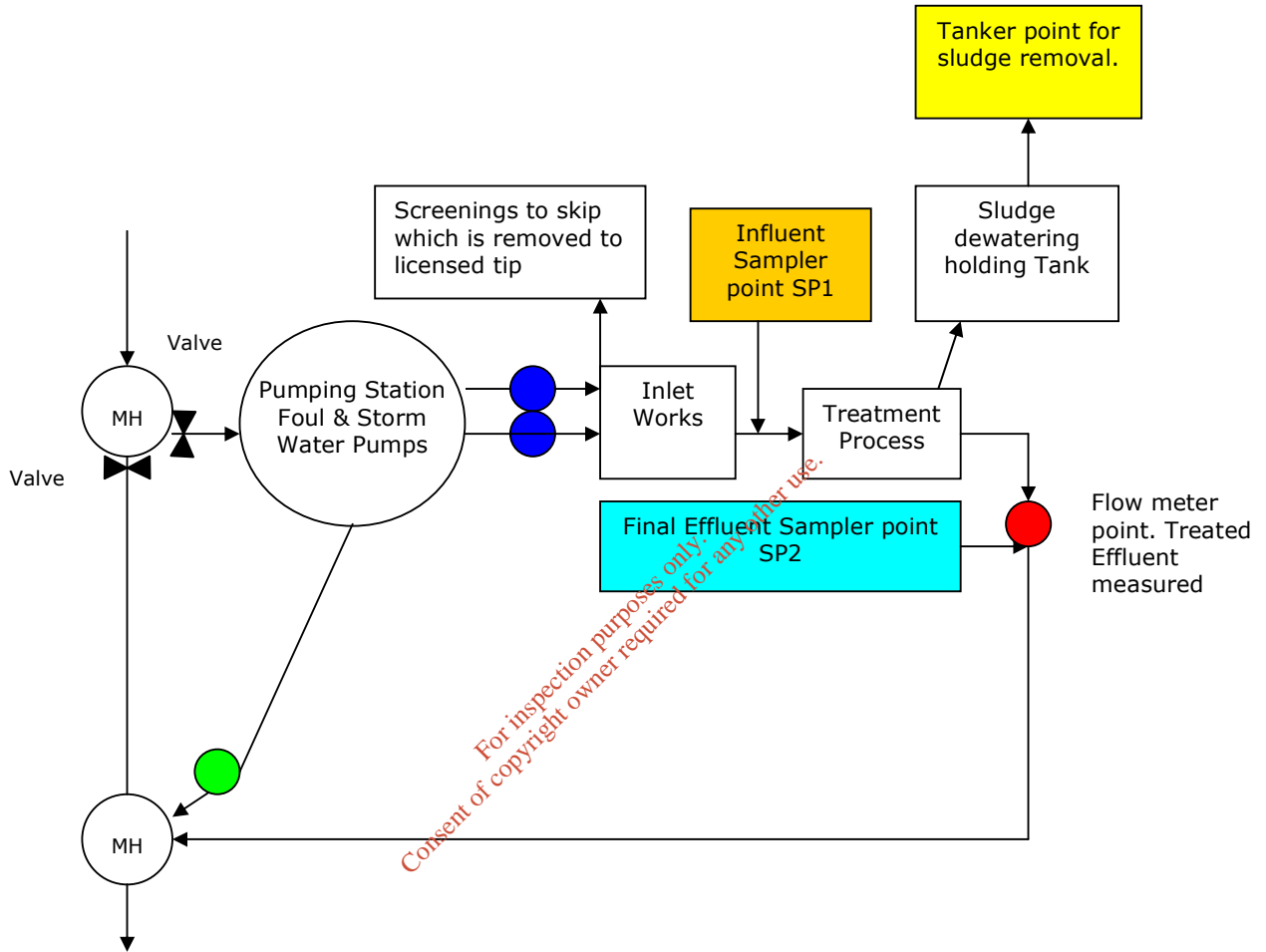
Effluent to the outfall is sampled at Sampler Point **SP002**.

The final effluent then leaves the plant via the outfall pipe. Sample command is only initiated on detection of a preset period of outlet flow.

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### North Cobh WWTP Schematic Diagram Showing Flow Metering and Sample Points



Note:-

- Final Effluent flow measurement
- Inlet Sample point SP1 - Outlet Sample Point SP2
- Tanker point to remove sludge.
- Emergency overflow measurement

**C.1.1 Storm Water Overflows**

There are no storm water overflow points associated with the North Cobh Waste Water Treatment Plant. The entire sewer network (with the exception of 20 existing dwellings) in the North Cobh area has been newly constructed and the foul and storm sewers are completely separate systems.

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### **C.1.2 Pumping Stations**

**(See Application Form Attachment C.1 Drawing No's. 7 & 8 for details on the following section).**

#### **Pumping Station**

The pumping station accepts the raw sewage from the area network. The influent flows into the pumping station foul sump by gravity and is lifted to the inlet works by 3 no. submersible pumps via a twin 200mm rising main.

#### **Fit-Out**

The sump of the pumping station is fitted with 3 no. fixed speed submersible Zenith pumps arranged in a Duty/Assist/Standby configuration. These pump the sewage to the inlet works via the twin rising main and through flow-meters **FM001** and **FM002** in a flow-meter chamber at the pumping station. These flow-meters record the inlet flows to the plant via PLC. Start/Stop control of these pumps is carried out by means of an ultrasonic level controller mounted in the sump which measures the level of the liquid. On failure of the duty pump the standby pump will start automatically.

#### **Process**

The ultrasonic level sensor provides an analogue 4-20mA signal to the PLC. The PLC programme has 4 preset levels corresponding to sump level. These are, from sump bottom to top: *Cut-out: duty*, *Cut-out: Assist*, *Cut-in: duty*, and *Cut-In: assist*. When the level in the wet well rises to the *duty cut-in level*, the duty pump **IP001, IP002 or IP003** starts. The duty pump runs until the liquid level falls to duty pump cut-out level.

During peak flows, the level in the sump continues to rise while the duty pump is running. The level in the sump rises to the *assist cut-in level*. This causes the Assist pump to start. As the sump pumps down, the *assist cut-out level* is reached and the assist pump stops. The duty pump continues to run until the liquid level drops to *duty cut-out level* and the pump stops.

Should either duty or assist pump fail, the standby unit will operate in its place. Should all three inlet pumps fail to operate or the incoming flow is greater than pumped flow the liquid level in the sump will rise to the overflow level and will overflow to the plant outfall via a 450mm dia. pipe to the plant outfall pipe by gravity. The emergency outfall is protected by a 5mm brushed screen. The Ultrasonic **US001** will open and close a wash actuated valve **SV01** and sends an alarm signal to the SCADA system when the liquid level reaches the overflow. An open channel flow meter **FM004** will measure flow through the

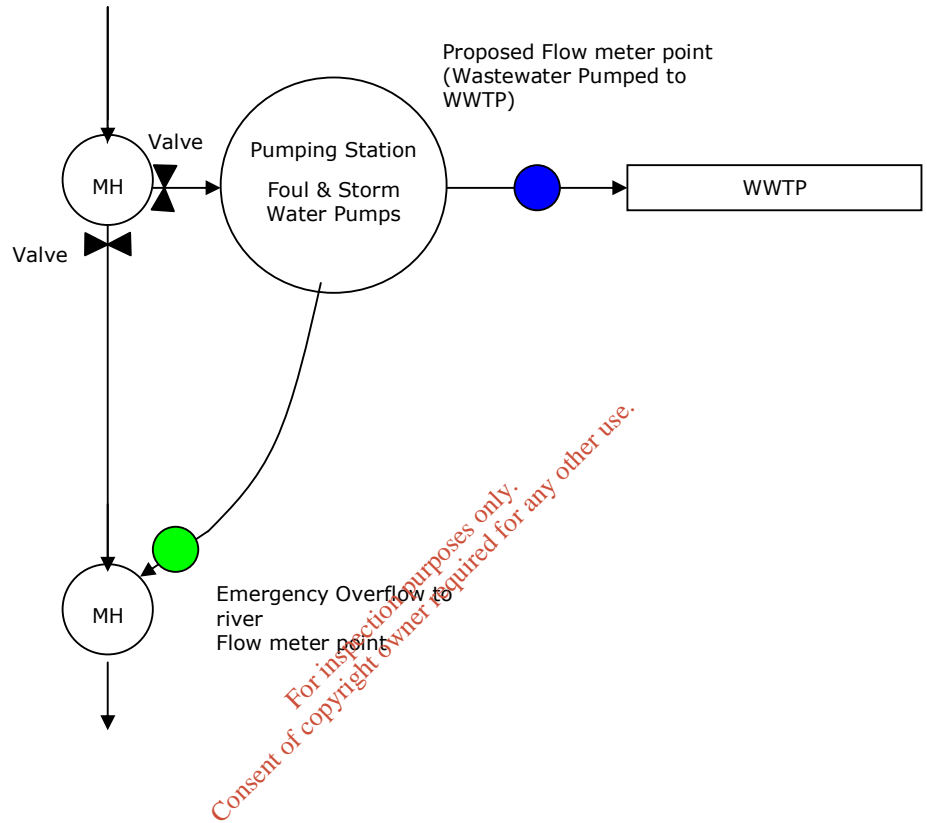
emergency overflow pipe in the event of a mechanical failure of all pumps. This discharges screened wastewater into the final effluent pipeline which discharges at Carrigaloe, Cobh.

When a high level in the storm tank is detected (**US003**), such high level will over-ride the operation of the assist pump. Assist pump will be returned to operation when the level in the storm tank drops to a predetermined level.


#### Protection and Control


- The pumps are fitted with overload and thermistor over-temperature protection.
- Oil seal protection is provided which generates an alarm upon seal failure.
- If the duty or assist pumps trip, the standby pump automatically takes its place.
- A pump trip generates an alarm.
- Dry run protection is provided via a hardwired relay on Ultrasonic **US001**. If this low level is reached all pumps are inhibited and an alarm is generated.
- There is a basket type arrangement on the inlet pipe to collect any large items that may enter the sump. Operation of the E-stop will stop the motor and generate an alarm.
- Failure of the 4-20mA Ultrasonic signal inhibits the foul pumps and generates an alarm.
- The pumps have Hand/Off/Auto Control. In hand, the following protection will be provided: Overload, over-temperature, and low low level cut-out.
- High-high level detection by **US001** generates an alarm and a text is sent to the operator.

### Cobh Pumping Station Schematic Diagram Showing Flow Metering Points



Note:-

 Flow meter point (Wastewater Pumped to WWTP)

 Flow meter point at which emergency overflow to river is measured

## C.2 Outfall Design and Construction

Provide details on the primary discharge point & secondary discharge points and storm overflows to include reference, location, design criteria and construction detail.

### Introduction

The North Cobh Sewers SLI project was advanced as part of the overall Cork Lower Harbour Sewage Scheme. As part of this advance contract a sewerage scheme was provided in the North Cobh area to allow development in this area to proceed.

The Cobh sewer system consists of two separate sewer outfalls one for surface water and the other for foul wastewater. Although both outfalls are discharging to the harbour the basic design concept for each of the outfalls is different.

Surface waters are to be discharged through an outfall located above the high tide level whereas the foul wastewater is to discharge below the low tide level at a sufficient distance from the shore line so as to achieve adequate diffusion/dispersion of the effluent.

### Foul Sewer Outfall

The foul outfall consists of a 150m length of 300mm diameter polyethylene (PE) pipe which is buried at a depth of 1.0m under the sea bed. The outfall pipe is covered by a flexible concrete mattress which provides anti-flotation restraint and protects it from risks such as being hit by a direct anchor drop.

Attached to the end of the outfall pipe is a diffuser constructed from a 5m length of 300mm diameter PE pipe. This diffuser has two 150mm diameter ports which have duckbill type non-return valves at the end of the ports. A drawing showing the plan, elevation and longitudinal section of the foul outfall is included in **Application Form Attachment C.2 Drawing No. 7.**

### Hydraulic design

The foul outfall discharges treated effluent. It is an interim measure to cater for the treated effluent from North Cobh. It is expected that within the next 10 year period or so that the Cork Lower Harbour Scheme will be implemented and the foul outfall will become redundant.

The outfall was designed to cater for an ultimate hydraulic flow of up to 75l/s. This is equivalent to the contribution from a population equivalent of 8,000 p.e.

The development of North Cobh is to occur on a phased basis. The outfall has been designed to cater for an initial flow of 11l/s which is considerably lower than the ultimate flow.

### **Impact of Foul Outfall**

#### Receiving waters

The treated effluent is discharged to the River Lee Estuary, Cork Harbour West Passage. Within the Lower Harbour area there are a number of protected conservation areas namely, Cork Harbour Special Protection Area (SPA). The West Passage of Cork Harbour is designated a sensitive water under the Urban Waste Water Treatment (Amendment) Regulations, 2004. There are no bathing areas (designated or otherwise) adjacent to the outfall; the nearest (and only) designated bathing area in Cork Harbour is at Fountainstown. A car ferry operates daily from Carrigaloe, Cobh to Passage West, the discharge point for the North Cobh WWTP is located below the low tide level at a sufficient distance from the shore line so as to achieve adequate diffusion/dispersion of the effluent.

The outfall from Carrigrenan WWTP also discharges to Cork Harbour Passage West upstream of this proposed outfall. Carrigrenan WWTP treats all of the sewage arising from Cork City which has a population equivalent of 413,000 pe. Cork County Council carries out routine assessment of the water quality in Cork Lower Harbour. The installation of the WWTP will result in a significant reduction in untreated wastewater discharging into the Cork Lower Harbour.

#### Erosion

The discharge points on the diffuser are orientated such that they discharge vertically upwards. The discharge ports extend 1.0m above the sea bed level. Based on this clearance and the direction of the discharge the risk of local erosion or bed scour is minimised.

**SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT**

Advice on completing this section is provided in the accompanying Guidance Note.

Give particulars of the source, location, nature, composition, quantity, level and rate of discharges arising from the agglomeration and, where relevant, the period or periods during which such emissions are made or are to be made.

Details of all discharges of waste water from the agglomeration should be submitted via the following web based link: [http://78.137.160.73/epa\\_wwd\\_licensing/](http://78.137.160.73/epa_wwd_licensing/). The applicant should address in particular all discharge points where the substances outlined in Tables D.1(i), (b) & (c) and D.1(ii), (b) & (c) of Annex 1 are emitted.

Where it is considered that any of the substances listed in Annex X of the Water Framework Directive (2000/60/EC) or any of the Relevant Pollutants listed in Annex VIII of the Water Framework Directive (2000/60/EC) are being discharged from the waste water works or are seen to be present in the receiving water environment downstream of a discharge from the works (as a result of any monitoring programme, e.g., under the Water Framework Directive Programme of Measures) the applicant shall screen the discharge for the relevant substance.

**D.1 Discharges to Surface Waters**

Details of all discharges of waste water from the agglomeration should be supplied via the following web based link: [http://78.137.160.73/epa\\_wwd\\_licensing/](http://78.137.160.73/epa_wwd_licensing/). Tables D.1(i)(a), (b) & (c), should be completed for the primary discharge point from the agglomeration and Tables D.1(ii)(a), (b) & (c) should be completed for each secondary discharge point, where relevant. Table D.1(iii)(a) should be completed for each storm water overflow. Individual Tables must be completed for each discharge point.

Where monitoring information is available for the influent to the plant this data should also be provided in response to Section D.1.

Supporting information should form **Attachment D.1**

Attachment included	Yes	No
	✓	



**D.2 Tabular Data on Discharge Points**

Applicants should submit the following information for each discharge point:

**Table D.2:**

<b>PT_CD</b>	<b>PT_TYPE</b>	<b>LA_NAME</b>	<b>RWB_TYPE</b>	<b>RWB_NAME</b>	<b>DESIGNATION</b>	<b>EASTING</b>	<b>NORTHING</b>
Point Code Provide label ID's	Point Type (e.g., Primary/Secondary/Storm Water Overflow)	Local Authority Name (e.g., Donegal County Council)	Receiving Water Body Type (e.g., River, Lake, Groundwater, Transitional, Coastal)	Receiving Water Body Name (e.g., River Suir)	Protected Area Type (e.g., SAC, candidate SAC, NHA, SPA etc.)	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference

An individual record (i.e. row) is required for each discharge point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at [www.epa.ie](http://www.epa.ie). This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, E.3 and F.2.

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**SECTION E: MONITORING**

Advice on completing this section is provided in the accompanying Guidance Note.

**E.1 Waste Water Discharge Frequency and Quantities – Existing & Proposed**

Provide an estimation of the quantity of waste water likely to be emitted in relation to all primary and secondary discharge points applied for. This information should be included in Table E.1(i) via the following web based link: [http://78.137.160.73/epa\\_wwd\\_licensing/](http://78.137.160.73/epa_wwd_licensing/).

Provide an estimation of the quantity of waste water likely to be emitted in relation to all storm water overflows within the agglomeration applied for. This information should be included in Table E.1(ii) via the following web based link: [http://78.137.160.73/epa\\_wwd\\_licensing/](http://78.137.160.73/epa_wwd_licensing/).

Indicate if composite sampling or continuous flow monitoring is in place on the primary or any other discharge points. Detail any plans and timescales for the provision of composite sampling and continuous flow meters.

**E.2. Monitoring and Sampling Points**

Programmes for environmental monitoring should be submitted as part of the application. These programmes should be provided as Attachment E.2.

Reference should be made to, provision of sampling points and safe means of access, sampling methods, analytical and quality control procedures, including equipment calibration, equipment maintenance and data recording/reporting procedures to be carried out in order to ensure accurate and reliable monitoring.

In determining the sampling programme to be carried out, the variability of the emission and its effect on the receiving environment should be considered.

Details of any accreditation or certification of analysis should be included. **Attachment E.2** should contain any supporting information.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
	✓	

**E.3. Tabular data on Monitoring and Sampling Points**

Applicants should submit the following information for each monitoring and sampling point:

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
Point Code Provide label ID's assigned in	Point Type (e.g., Primary, Secondary,	Monitoring Type M = Monitoring S = Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

section E of application	Storm Water Overflow)				
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An individual record (i.e., row) is required for each monitoring and sampling point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at [www.epa.ie](http://www.epa.ie). This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and F.2.

**E.4 Sampling Data**

Regulation 16(1) (h) of the Waste Water Discharge (Authorisation) Regulations 2007 requires all applicants in the case of an existing waste water treatment plant to specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application.

Regulation 16(1) (l) of the regulations requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

**Attachment E.4** should contain any supporting information.

Attachment included	Yes	No
	✓	

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### **E.1 Waste Water Discharge Frequency and Quantities – Existing & Proposed**

Treated effluent discharged from the North Cobh WWTP is sampled at the treatment plant by means of a 24-hour composite sampler. The final effluent flow is also measured at the same location.

A flow monitor is located at the emergency overflow from the pumping station prior to discharge to the main treated effluent sewer outfall.

### **E.2 Monitoring and Sampling Points**

The plant will be incorporated into the Urban Waste Water monitoring programme from January 2009.

The Contractor is required to monitor and record the status of all parameters appropriate to proper control and operation of the plant. Specifically the following parameters are to be monitored and recorded:

- All parameters required by the Contractor to operate the facility in accordance with his methods and practices;
- Instantaneous and totalised flows pumped forward to the aeration tank from the onsite Pumping Station;
- Weekly COD analysis of 24 hour flow proportional samples of the waste water received from the catchment sample to be taken at the inlet works – Influent Sampler Point;
- Weekly BOD<sub>5</sub> analysis of random 24 hour flow proportional samples of the waste water received from the catchment sample to be taken at the inlet works – Influent Sampler Point;
- Weekly SS analysis of 24 hour flow proportional samples of the waste water received from catchment sample to be taken at the inlet works – Influent Sampler Point 1;
- Weekly pH analysis of 24 hour flow proportional samples of the waste water received from catchment sample to be taken at the inlet works – Influent Sampler Point;
- Monthly TP-P analysis of 24 hour flow proportional samples of the waste water received from catchment sample to be taken at the inlet works – Influent Sampler Point;

- Weekly COD analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP – Final Effluent Sampler Point;
- Weekly BOD<sub>5</sub> analysis of random 24 hour flow proportional samples of the treated effluent discharged from the WWTP – Final Effluent Sampler Point;
- Weekly SS analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP – Final Effluent Sampler Point;
- Weekly pH analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP – Final Effluent Sampler Point;
- Monthly TP-P analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP – Final Effluent Sampler Point;
- DS Content of all sludges leaving the WWTP
- Instantaneous analysis of the turbidity of the treated effluent discharged from the WWTP – Final Effluent Sampler Point;
- Odour sampling analysis using olfactometry at the site boundary shall be carried out upon commencement of the O&M Contract and then on request of the Employer.
- Noise monitoring shall be carried out upon commencement of the O&M Contract and then on request of the Employer. Noise shall be monitored at the site boundaries. Noise shall be monitored at different locations and on different boundaries on consecutive tests;
- The Collection and issuing of samples for pH, BOD, COD, SS, , TP-P, once a month to an independent laboratory for analysis; and
- All parameters necessary to demonstrate the proper performance of the treatment process including DO, SVI & MLSS monitoring.

The EPA carries out routine assessment of the water quality in Cork Lower Harbour. The installation of the WWTP will result in a significant reduction in untreated wastewater discharging into the Cork Lower Harbour. Therefore no mitigation measures are deemed to be required.

## **SECTION F: EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)**

*Advice on completing this section is provided in the accompanying Guidance Note.*

Detailed information is required to enable the Agency to assess the existing receiving environment. This section requires the provision of information on the ambient environmental conditions within the receiving water(s) upstream and downstream of any discharge(s).

Where development is proposed to be carried out, being development which is of a class for the time being specified under Article 24 (First Schedule) of the Environmental Impact Assessment Regulations, the information on the state of the existing environment should be addressed in the EIS. **In such cases, it will suffice for the purposes of this section to provide adequate cross-references to the relevant sections in the EIS.**

### **F.1. Assessment of Impact on Receiving Surface or Ground Water**

- Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment including environmental media other than those into which the emissions are to be made.
- Details of all monitoring of the receiving water should be supplied via the following web based link: [http://78.133.160.73/epa\\_wwd\\_licensing/](http://78.133.160.73/epa_wwd_licensing/). Tables F.1(i)(a) & (b) should be completed for the primary discharge point. Surface water monitoring locations upstream and downstream of the discharge point shall be screened for those substances listed in Tables F.1(i)(a) & (b). Monitoring of surface water shall be carried out at not less than two points, one upstream from the discharge location and one downstream.
- For discharges from secondary discharge points Tables F.1(ii)(a) & (b) should be completed. Furthermore, provide summary details and an assessment of the impacts of any existing or proposed emissions on the surface water or ground (aquifers, soils, sub-soils and rock environment), including any impact on environmental media other than those into which the emissions are to be made.
- Provide details of the extent and type of ground emissions at the works. For larger discharges to groundwaters, e.g., from Integrated Constructed Wetlands, large scale percolation areas, etc., a comprehensive report must be completed which should include, inter alia, topography, meteorological data, water quality, geology, hydrology, and hydrogeology. The latter must in particular present the aquifer classification and vulnerability. The Geological Survey of Ireland Groundwater Protection Scheme Dept of the Environment and Local Government, Geological Survey of Ireland, EPA (1999) methodology should be used for any such classification. This report should also identify all surface water bodies and water wells that may be at risk as a result of the ground discharge.
- Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other

legislative standards. Submit a copy of the most recent water quality management plan or catchment management plan in place for the receiving water body. Give details of any designation under any Council Directive or Regulations that apply in relation to the receiving water.

- Provide a statement as to whether or not emissions of main polluting substances (as defined in the *Dangerous Substances Regulations S.I. No. 12 of 2001*) to water are likely to impair the environment.
- In circumstances where water abstraction points exist downstream of any discharge describe measures to be undertaken to ensure that discharges from the waste water works will not have a significant effect on faecal coliform, salmonella and protozoan pathogen numbers, e.g., *Cryptosporidium* and *Giardia*, in the receiving water environment.
- Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on –
  - (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive) —
    - (i) notified for the purposes of Regulation 4 of the Natural Habitats Regulations, subject to any amendments made to it by virtue of Regulation 5 of those Regulations,
    - (ii) details of which have been transmitted to the Commission in accordance with Regulation 5(4) of the Natural Habitats Regulations, or
    - (iii) added by virtue of Regulation 6 of the Natural Habitats Regulations to the list transmitted to the Commission in accordance with Regulation 5(4) of those Regulations,
  - (b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC<sup>1</sup> in accordance with the procedures laid down in Article 21 of that Directive,
  - (c) a special area of conservation within the meaning of the Natural Habitats Regulations, or
  - (d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC<sup>2</sup>;

<sup>1</sup>Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ No. L 206, 22.07.1992)

<sup>2</sup>Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (OJ No. L 103, 25.4.1979)

- Describe, where appropriate, measures for minimising pollution over long distances or in the territory of other states.
- This section should also contain full details of any modelling of discharges from the agglomeration. Full details of the assessment and any other relevant information on the receiving environment should be submitted as **Attachment F.1**.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
	✓	

**F.2 Tabular Data on Drinking Water Abstraction Point(s)**

Applicants should submit the following information for each downstream or downgradient drinking water abstraction point. The zone of contribution for the abstraction point should be delineated and any potential risks from the waste water discharge to the water quality at that abstraction point identified.

<b>ABS_CD</b>	<b>AGG_SERVED</b>	<b>ABS_VOL</b>	<b>PT_CD</b>	<b>DIS_DS</b>	<b>EASTING</b>	<b>NORTHING</b>	<b>VERIFIED</b>
Abstraction Code	Agglomeration served	Abstraction Volume in m <sup>3</sup> /day	Point Code Provide label ID's	Distance Downstream in meters from Emission Point to Abstraction Point	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

**Note:** Attach any risk assessment that may have been carried out in relation to the abstraction point(s) listed.

An individual record (i.e. row) is required for each abstraction point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at [www.epa.ie](http://www.epa.ie). This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and E.3.

**Attachment F.2** should contain any supporting information.



## **F.1. Assessment of Impact on Receiving Surface or Ground Water**

### ***Foreshore Licence & Current Discharge Standards***

The current treatment standards that the WWTP is operating to is contained within Cork County Councils application to the Department of the Marine & Natural Resources for a Foreshore licence in August 2006 which states the North Cobh WWTP shall achieve a final effluent standard of:-

- BOD 25MG/L
- SS 35MG/L

### ***Assessment of Relevant Legislation Applicable to North Cobh WWTP***

The following assesses the relevant European Union Directives and Irish Statutory Legislation that is applicable to the discharge standards from the North Cobh WWTP.

- Dangerous Substances Directive 2006/11/EC,
- Water Framework Directive 2000/60/EC,
- Birds Directive 79/409/EEC,
- Groundwater Directives 80/68/EEC & 2006/118/EC,
- Drinking Water Directives 80/778/EEC,
- Urban Waste Water Treatment Directive 91/271/EEC,
- Habitats Directive 92/43/EEC,
- Environmental Liabilities Directive 2004/35/EC,
- Bathing Water Directive 76/160/EEC, and
- Shellfish Waters Directive (79/923/EEC).

### ***Dangerous Substances Directive 2006/11/EC,***

Council Directive 2006/11/EEC recognises the need for action to be taken by member states to protect the aquatic environment from pollution, in particular that caused by certain persistent, toxic and bioaccumulable substances. The North Cobh WWTP treats wastewater from primarily domestic sources with a very limited amount of 'dry' industry associated with it. The influent and effluent have been screened for dangerous substances and is compliant to the above regulation.

**Birds Directive 79/409/EEC,**

Cork Harbour is a Special Protection Area, the WWTP at North Cobh was designed and assessed so that no environmental damage will arise from the WWTP. This is discussed in detail in the EIS in Attachment B.6 of the application.

**Groundwater Directives 80/68/EEC & 2006/118/EC,**

Not Applicable

**Drinking Water Directives 80/778/EEC,**

There are no water abstraction points down stream of the discharge point from the WWTP at North Cobh

**The Urban Waste Water Treatment Directive 91/271/EEC and Amendment Directive 98/15/EEC**

The Urban Waste Water Treatment Regulations, (S.I. 254 of 2001) gives effect to provisions of the Urban Wastewater Treatment Directive (91/271/EEC). The 2001 Irish Regulations cover various requirements in relation to the collection and treatment of urban wastewater.

Article 4 (1) (c) states that *'In the case of urban waste water entering collecting systems, a sanitary authority shall provide treatment plants which provide for secondary treatment or an equivalent treatment by 31 December 2005, in respect of all discharges to freshwaters and estuaries from agglomerations with a population of between 2,000 and 10,000.'*

The **Second Schedule (Part 1)** of the 2001 Regulations states that the Treated Effluent should have the characteristics shown in **Table G.1** below.

**Table F.1.(a) Treated Effluent Characteristics**

<b>Parameter</b>	<b>Concentration</b>		<b>Minimum % of Reduction</b>
<b>BOD<sub>5</sub></b>	25.0	mg/l O <sub>2</sub>	70-90
<b>SS</b>	35.0	mg/l	90
<b>COD</b>	125	mg/l O <sub>2</sub>	75

The **Third Schedule** of the 2001 Regulations (as Amended by the **2004 Regulations**) gives a list of sensitive areas which in accordance with Article 4 (2) (a) for population equivalent above 10,000PE in sensitive areas require phosphorus and nitrogen consents in accordance the **Second Schedule (Part 2)**. The Lee Estuary, Cork Harbour West Passage is identified as a sensitive area however the plant is designed for a PE of less than 10,000 therefore this part of the regulation does not apply.

#### **Urban Waste Water Treatment (Amendment) Regulations 2004 (S.I. No. 440 of 2004)**

These Regulations amend the Waste Water Treatment Regulations, 2001 by-

- a. Designating two additional areas (in Cork Harbour) as sensitive areas, and
- b. Making some minor technical amendments

The Waste Water Treatment Regulations, 2001 impose requirements in relation to discharges from urban waste water treatment facilities and give effect to Directive No. 91/271/EEC (the Urban Waste Water Treatment Directive) and Directive No. 2000/60/EC (the Water Framework Directive)

#### **Habitats Directive 92/43/EEC,**

Cork Harbour is designated as an SPA (site code 004030). A site synopsis for the designation is included in Attachment F.

### **Bathing Water Directive 76/160/EEC**

Council Directive 76/160/EEC 1975 concerning bathing water quality and the associated Bathing Water Regulations (SI No 177 of 1998) lay down quality requirements for inland and coastal waters designated bathing areas. The quality standards rely predominantly on microbiological parameters. The Lee Estuary, Cork Harbour West Passage is not designated as a bathing water (nearest bathing water is at Fountainstown approximately 5 miles down-stream of the final effluent outfall). There are no other bathing areas within the immediate vicinity of the discharge point. Therefore there are no further refinements of the treated effluent characteristics listed in **Table F.1. (a)** above arising from the Bathing Water Directive.

### **EU Shellfish Waters Directive (79/923/EEC); and EU Directive on Health Conditions and the Placing on the Market of Live Biovalve Molluscs (91/67/EEC) and associated amendments**

There are two main EU directives relating to Shellfish Waters. These are the Shellfish Directive (79/923/EEC) as implemented by the Quality of Shellfish Waters Regulations 2006 (SI No 268 of 2006), and the Directive on Health Conditions and the placing on the market of Live Biovalve Molluscs (91/67/EEC) and its associated amendments.

The Lee Estuary, Cork Harbour West Passage is not designated, "Shellfish Waters", under the Quality of Shellfish Waters Regulations 2006. However it is a licensed aquaculture area. It is proposed to designate areas of Cork Harbour near Rostellan and Aghada as designated Shellfish Waters. The Department of Communications, Marine, and Natural Resources Live Bivalve Molluscs (Production Areas) Designation 2006 has confirmed that Cork Harbour, into which the Lee Estuary, Cork Harbour West Passage flows, is a licensed area for the cultivation of shellfish such as oysters as detailed in **Table F.1.(b)** below.

**Table F.1. (b) Designated Bivalve Mollusc Production Areas in Ireland - October 2006**

Production Area	Boundaries	Bed Name	Species	Previous Classification	Current Classification
Cork Harbour	Between 8°16.4' W and 8° 15.6' W.	North Channel West	Oysters	B	B
	Between 8°14.6'W and 8°13.2'W.	North Channel East	Oysters	B	B
	Ahada Pier to Gold Point	Rostellan	Oysters	B	B

In accordance with the Live Bivalve Molluscs (Production Areas) Designation 2006 and Council Directive 91/492/EEC, Cork Harbour has a Category B status which means that shellfish from this area have to be treated in a purification centre or a relay bed before they can be placed on the market for human consumption. The water quality standards for Shellfish in Category B Waters is summarised in **Table F.3**. The status of the shellfish waters is monitored on a monthly basis by the National Marine Institute.

**Table F.3 Requirements for Faecal Coliform levels for Live Bivalve Molluscs in Accordance with EEC Directive 91/492/EEC**

Category of Waters	Faecal Coliforms /100g of Flesh	Compliance of Samples	Further Treatment
A- Immediate Human Consumption	<300	100% <300	Not Required
<b>B- Human Consumption After Treatment</b>	<b>300 - 6,000</b>	<b>90% &lt; 6,000</b>	<b>Purification after Relaying</b>
C-Human Consumption After Treatment	6,000 - 60,000	100% < 60,000	Relaying for long period -Intensive Purification

**Environmental Liabilities Directive 2004/35/EC,**

The WWTP was designed to ensure that no environmental damage would be caused to the surrounding environment. This included the separation of foul and surface water to remove combined surface water overflows discharging untreated sewage into the watercourse.

**Supporting Information**

A flora and fauna study was carried prior to the construction of the WWTP at North Cobh this is provided in Attachment F.1. An EIS have been completed for the Lower Harbour Sewerage Scheme and is available in Attachment E.6 of the Application.

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**SECTION G: PROGRAMMES OF IMPROVEMENTS**

Advice on completing this section is provided in the accompanying Guidance Note.

**G.1 Compliance with Council Directives**

Provide details on a programme of improvements to ensure that emissions from the agglomeration or any premises, plant, methods, processes, operating procedures or other factors which affect such emissions will comply with, or will not result in the contravention of the;

- Dangerous Substances Directive 2006/11/EC,
- Water Framework Directive 2000/60/EC,
- Birds Directive 79/409/EEC,
- Groundwater Directives 80/68/EEC & 2006/118/EC,
- Drinking Water Directives 80/778/EEC,
- Urban Waste Water Treatment Directive 91/271/EEC,
- Habitats Directive 92/43/EEC,
- Environmental Liabilities Directive 2004/35/EC,
- Bathing Water Directive 76/160/EEC, and
- Shellfish Waters Directive (79/923/EEC).

**Attachment G.1** should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
	✓	

**G.2 Compliance with Water Quality Standards for Phosphorus Regulations (S.I. No. 258 of 1998).**

Provide details on a programme of improvements, including any water quality management plans or catchment management plans in place, to ensure that improvements of water quality required under the Water Quality Standards for Phosphorous Regulations (S.I. No. 258 of 1998) are being achieved. Provide details of any specific measures adopted for waste water works specified in Phosphorus Measures Implementation reports and the progress to date of those measures. Provide details highlighting any waste water works that have been identified as the principal sources of pollution under the P regulations.

**Attachment G.2** should contain the most recent programme of improvements and any associated documentation requested under Section G.3 of the application.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
		<b>Not Applicable</b>

**G.3 Impact Mitigation**

Provide details on a programme of improvements to ensure that discharges from the agglomeration will not result in significant environmental pollution.

**Attachment G.3** should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
		<b>Not Applicable</b>

**G.4 Storm Water Overflow**

Provide details on a programme of improvements to ensure that discharges other than the primary and secondary discharges comply with the definition of 'storm water overflow' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007.

**Attachment G.4** should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
		<b>Not Applicable</b>

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#### **G.1 Compliance with Council Directives**

The plant was designed to meet all current legislation and therefore no programme of improvements is considered necessary. The plant will be incorporated into the Urban Waste Water monitoring programme from January 2009.

#### **G.4 Storm Water Overflows**

The North Cobh sewerage system comprises two completely separate foul and storm systems and therefore there are no combined storm water overflows.

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**SECTION H: DECLARATION**

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**Declaration**

I hereby make application for a waste water discharge licence/revised licence, pursuant to the provisions of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this application itself and to any further information or submission, whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Signed by :   
(on behalf of the organisation)

Date : 18th Sept 08

Print signature name: Patricia Power

Position in organisation: Director of Services

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**SECTION I: JOINT DECLARATION**

**NOT APPLICABLE**

**Joint Declaration** <sup>Note1</sup>

I hereby make application for a waste water discharge licence/revised licence, pursuant to the provisions of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this application itself and to any further information or submission whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

**Lead Authority**

**Signed by :** \_\_\_\_\_ **Date :** \_\_\_\_\_  
*(on behalf of the organisation)*

**Print signature name:** \_\_\_\_\_

**Position in organisation:** \_\_\_\_\_

**Co-Applicants**

**Signed by :** \_\_\_\_\_ **Date :** \_\_\_\_\_  
*(on behalf of the organisation)*

**Print signature name:** \_\_\_\_\_

**Position in organisation:** \_\_\_\_\_

**Signed by :** \_\_\_\_\_ **Date :** \_\_\_\_\_  
*(on behalf of the organisation)*

**Print signature name:** \_\_\_\_\_

**Position in organisation:** \_\_\_\_\_

**Note 1:** In the case of an application being lodged on behalf of more than a single water services authority the following declaration must be signed by all applicants.

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