

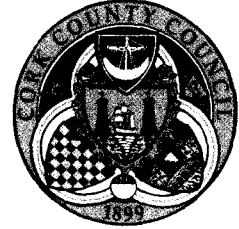
# Comhairle Contae Chorcaí Cork County Council

Annabella,  
Mallow,  
Co. Cork.

Tel: (022) 21123 • Fax: (022)21983  
Email: [northcork@corkcoco.ie](mailto:northcork@corkcoco.ie)  
Web: [www.corkcoco.ie](http://www.corkcoco.ie)

Annabella,  
Mala,  
Co. Chorcaí.

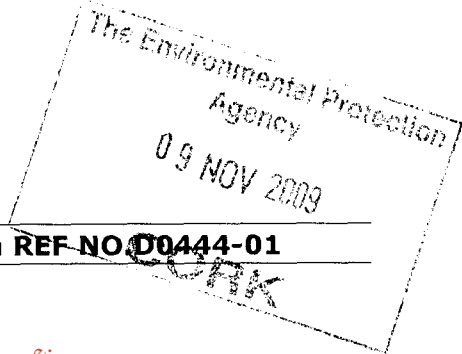
Fón: (022) 21123 • Faics: (022) 21983  
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Suíomh Gréasáin: [www.corkcoco.ie](http://www.corkcoco.ie)



Administration  
Environmental Licensing Programme,  
Office of Climate, Licensing & Resource Use,  
Environmental Protection Agency  
Headquarters  
PO Box 3000  
Johnstown Castle Estate  
County Wexford.

4<sup>th</sup> November 2009.

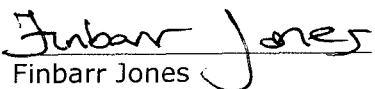
**Subject: WDDL Application For Churchtown REF NO D0444-01**



I refer to the email of the 2<sup>nd</sup> November, from Una O'Callaghan, last in relation to missing pages from the Application for the above named site.

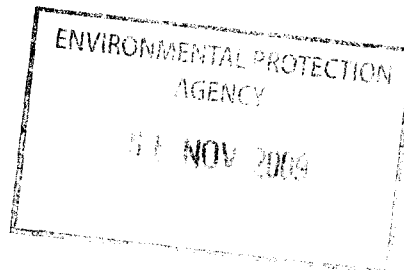
Please find 2 Number copies for the application enclosed.

Yours sincerely,



Finbarr Jones  
Resident Executive Engineer - WSIP

Direct Tel: 022-30451  
Email: [finbarrj.jones@corkcoco.ie](mailto:finbarrj.jones@corkcoco.ie)

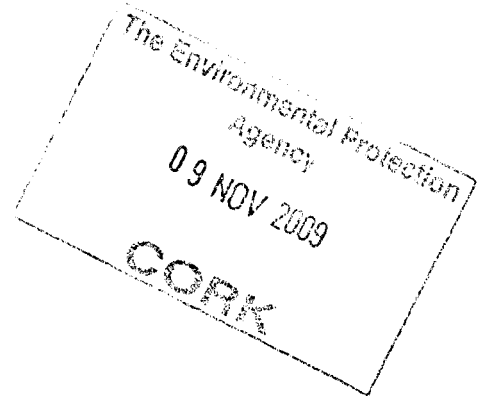


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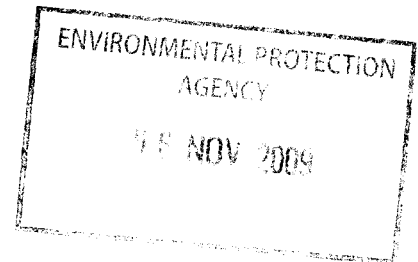
This is a draft document and is subject to revision.



# Waste Water Discharge Licence Application Form

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<b>EPA Ref. N<sup>o</sup>:</b> <i>(Office use only)</i>	00444-01
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**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)



**Tracking Amendments to Draft Application Form**

Version No.	Date	Amendment since previous version	Reason
V. 1.	11/10/07	N/A	
V. 2.	18/10/07	Inclusion of a Note 1 superscript for Orthophosphate in Tables D.1(i)(b) & D.1(ii)(b).	To highlight the requirement for filtered samples in measurement of O-Phosphate for waste water discharges.
V.3.	13/11/07	Amend wording of Section F.2 to include 'abstraction'.  Amend wording of Checklist in Annex to reflect wording of Regulation 16(5) of S.I. No. 684 of 2007.  Inclusion of unique point code for each point of discharge and storm water overflow.	To accurately reflect the information required  To accurately reflect the Regulations and to obtain the application documentation in appropriate format.  To aid in cross-referencing of application documentation.
V.4	18/04/08	Inclusion of requirement to provide name of agglomeration to which the application relates.  Amend wording of Section B.7. (iii) to reflect the title of Water Services Authority.  Addition of new Section B.9 (ii) in order to obtain information on developments yet to contribute to the waste water works.  Addition of sub-sections C.1.1 & C.1.2 in order to clarify information required for Storm water overflow and pumping stations within the works.  Amend Section D.1 to include a requirement for monitoring data for influent	To accurately determine the agglomeration to be licensed.  To accurately reflect the Water Services Act, 2007.  To obtain accurate population equivalent figures for the agglomeration.  To obtain accurate information on design and spill frequency from these structures.  To acquire information on the population loading onto the plant and to provide information on performance rates within



Waste Water Discharge Authorisation Application Form

		to waste water treatment plants, where available. Amend wording of Section E.1 to request information on composite sampling/flow monitoring provisions.	the plant. To acquire accurate information on the sampling and monitoring provisions for discharges from the works.
V.5	07/07/2008	Amend wording of B.7 (iii) to include reference to Water Services Authorities.  Amend Section G.1 to include Shellfish Waters Directive.	To accurately reflect the Water Services Act, 2007 requirements.
V.6	26/08/2007	Amendments to Section D to reflect new web based reporting.  Amended requirements for reporting on discharges under E.1 Waste Water Discharge Frequency and Quantities.  Amendment to Section F.1 to specify the type of monitoring and reporting required for the background environment.  Removal of Annexes to application form.	To clarify the reporting requirements.  To streamline reporting requirements.  To clarify the reporting requirements for ambient monitoring.  To reflect the new web based reporting requirements.

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Environmental Protection Agency  
Application for a Waste Water Discharge Licence  
Waste Water Discharge (Authorisation) Regulations 2007.

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## ABOUT THIS APPLICATION FORM

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This form is for the purpose of making an application for a Waste Water Discharge Licence under the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) or for the review of an existing Waste Water Discharge licence.

The Application Form **must** be completed in accordance with the instructions and guidance provided in the *Waste Water Discharge Licensing Application Guidance Note*. The Guidance Note gives an overview of Waste Water Licensing, outlines the licence application process (including the number of copies required) and specifies the information to be submitted as part of the application. The Guidance Note and application form are available to download from the Licensing page of the EPA's website at [www.epa.ie](http://www.epa.ie).

A valid application for a Waste Water Discharge Licence must contain the information prescribed in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). Regulation 16 of the Regulations sets out the statutory requirements for information to accompany a licence application. The application form is designed in such a way as to set out these questions in a structured manner and not necessarily in the order presented in the Regulations. In order to ensure a legally valid application in respect of Regulation 16 requirements, please complete the Regulation 16 Checklist provided in Annex 2.

This Application Form does not purport to be and should not be considered a legal interpretation of the provisions and requirements of the Waste Water Discharge (Authorisation) Regulations, 2007. While every effort has been made to ensure the accuracy of the material contained in the Application Form, the EPA assumes no responsibility and gives no guarantee, or warranty concerning the accuracy, completeness or up-to-date nature of the information provided herein and does not accept any liability whatsoever arising from any errors or omissions.

Should there be any contradiction between the information requirements set out in the Application Form and any clarifying explanation contained in the accompanying Guidance Note, then the requirements in this Application Form shall take precedence.

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## PROCEDURES

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The procedure for making and processing of applications for waste water discharge licences, and for the processing of reviews of such licences, appear in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) and is summarised below. The application fees that shall accompany an application are listed in the Third Schedule to the Regulations.

Prior to submitting an application the applicant must publish in a newspaper circulating in the area, and erect at the point nearest to the waste water treatment plant concerned or, if no such plant exists, at a location nearest the primary discharge point, a notice of intention to apply. An applicant, not being the local 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, must also notify the relevant Local Authority, in writing, of their intention to apply.

An application for a licence must be submitted on the appropriate form (available from the Agency) with the correct fee, and should contain relevant supporting documentation as attachments. The application should be based on responses to the form and include supporting written text and the appropriate use of tables and drawings. Where point source emissions occur a system of unique reference numbers should be used to denote each discharge point. These should be simple, logical, and traceable throughout the application.

The application form is divided into a number of sections of related information. The purpose of these divisions is to facilitate both the applicant and the Agency in the provision of the information and its assessment. **Please adhere to the format as set out in the application form and clearly number each section and associated attachment, if applicable, accordingly.** Attachments should be clearly numbered, titled and paginated and must contain the required information as set out in the application form. Additional attachments may be included to supply any further information supporting the application. Any references made should be supported by a bibliography.

**All questions should be answered. Where information is requested in the application form, which is not relevant to the particular application, the words "not applicable" should be clearly written on the form. The abbreviation "N/A" should not be used.**

Additional information may need to be submitted beyond that which is explicitly requested on this form. Any references made should be supported by a bibliography. The Agency may request further information if it considers that its provision is material to the assessment of the application. Advice should be sought from the Agency where there is doubt about the type of information required or the level of detail.

Information supplied in this application, including supporting documentation will be put on public display and be open to inspection by any person.

Applicants should be aware that a contravention of the conditions of a waste water discharge licence is an offence under the Waste Water Discharge (Authorisation) Regulations, 2007.



**The provision of information in an application for a waste water discharge licence which is false or misleading is an offence under Regulation 35 of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).**

*Note: Drawings. The following guidelines are included to assist applicants:*

- *All drawings submitted should be titled and dated.*
- *All drawings should have a unique reference number and should be signed by a clearly identifiable person.*
- *All drawings should indicate a scale and the direction of north.*
- *All drawings should, generally, be to a scale of between 1:20 to 1:500, depending upon the degree of detail needed to be shown and the size of the facility. Drawings delineating the boundary can be to a smaller scale of between 1:1000 to 1:10560, but must clearly and accurately present the required level of detail. Drawings showing the waste water treatment plant location, if such a plant exists, can be to a scale of between 1:50 000 to 1:126 720. All drawings should, however, be A3 or less and of an appropriate scale such that they are clearly legible. Provide legends on all drawings and maps as appropriate.*
- *In exceptional circumstances, where A3 is considered inadequate, a larger size may be requested by the Agency.*

**It should be noted that it will not be possible to process or determine the application until the required documents have been provided in sufficient detail and to a satisfactory standard.**

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## **SECTION A: NON-TECHNICAL SUMMARY**

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*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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## **SECTION A: NON-TECHNICAL SUMMARY**

---

Churchtown is situated 4km west of the N20, half way between Cork and Limerick. The village is located in an area, which is generally referred to as the 'Goldenvale', which comprise an extensive area of predominately flat or undulating topography along the Blackwater valley. The census of 1996 indicated a population of 650, while the census of 2002 showed a population of 686.

### **The Waste Water Works and the Activities Carried Out Therein**

The wastewater in Churchtown is collected in a partially combined foul and separate foul sewerage drainage network. The wastewater from the village gravitates to a pumping station located within the village from where the effluent is pumped to wastewater treatment plant.

Churchtown WWTP is designed for a Population Equivalent (PE) of 1,000, which was commissioned in 2007. Activated Sludge is the process employed at the Churchtown waste water treatment plant. Influent initially gravitates into the inlet works, which consists of an automatic screen, measurement flume and a circular concrete inlet sump, from where the effluent is pumped to an above ground circular aeration tank. The effluent then flows into the adjacent circular clarifier. The solids settle while the supernatant flows over the weir and is directed to the sand filter system. From here the effluent is discharged via an ultraviolet system to a percolation area, which slopes to a stream adjacent to the site boundary.

Sludge may be returned from the clarifier to the aeration tank and excess sludge is removed from the clarifier as required to the sludge holding tank.

In the event of high storm flows effluent may bypass the plant via the baffle plate at the inlet manhole. During normal storm periods, effluent overflows at the sump to the storm holding tank, which gravities back to the sump after the sump level reduces. In the event of the storm tank filling, the screened effluent discharges via the outlet pipe.

Currently the WWTP is receiving flows ranging from 120m<sup>3</sup>/d to 300m<sup>3</sup>/d, with an average DWF of 120m<sup>3</sup>/d entering the plant. Based average hydraulic load of 200l/d/p, the PE equates to 600.

Churchtown WWTP is operated by Cork County Council. The plant is operated by a caretaker who duties also involves the maintenance of a number of other small WWTP's in the area. The caretaker is on duty from 8.00am to 5.30pm Monday – Saturday.

### **The sources of emissions from the waste water works**

The pollution load for the Churchtown agglomeration arises from the following areas:

- Domestic population
- Commercial premises
- School & crèches
- Infiltration

The sewerage from all commercial premises is collected via the public sewer and treated in conjunction with the domestic waste at the WWTP.

Currently the WWTP is receiving flows ranging from 120m<sup>3</sup>/d to 300m<sup>3</sup>/d, with an average DWF of 120m<sup>3</sup>/d entering the plant.

**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 final effluent is discharged to the Percolation Area, which is adjacent to the wastewater treatment plant site. The maximum flow to the existing WWTP is in the order of 120m<sup>3</sup>/d to 300m<sup>3</sup>/d.

**The proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the waste water works**

**Technology**

The WWTP has a sufficient number of standby pumps, automatic sample facilities, etc is provided to ensure continuation of the wastewater treatment.

The treatment works consists of the following elements:

- Inlet Works
- Forward Feed Sump
- Aeration Tank
- Settling Tank
- Storm Tank
- Sludge Tank
- Sand Filters
- UV System
- Percolation Area

**Techniques**

The new WWTP shall be operated and managed in accordance with the Performance Management System, developed by the Water Service National Training Group (WSMTG).

**Further measures planned to comply with the general principle of the basic obligations of the operator, i.e., that no significant pollution is caused**

A complete new WWTP was commissioned for the village in 2007, replacing an overloaded package plant, located at the same site. In addition to the commissioning of the new WWTP, the village pumping station located in the village was upgraded.

There are no further works envisaged to be undertaken on Churchtown WWTP in the near future.

**Measures planned to monitor emissions into the environment**

The Cork County Council Environmental Laboratory carries out sampling of the influent and effluent biannually. Sampling, Monitoring and analysis of the wastewater sludge is also undertaken by the Environmental Laboratory.

The Cork County Council Environmental Department located in Mallow takes samples from the River Bride upstream and downstream of the wastewater

treatment plant approximately 2 times per year. Samples of the influent and effluent are also taken at these times.

The new wastewater treatment plant is equipped with automatic samplers on the inlet, overflow and outlet lines.

The EU Water Framework Directive Monitoring Programme is to be fully operational by the year 2012. This monitoring programme was prepared by the EPA to meet the requirements of the EU Water Framework Directive (2000/60/EC) and National Regulations implementing the Water Framework Directive (S.I. No. 722 of 2003) and National Regulations implementing the Nitrates Directive (S.I. No. 788 of 2005).

List of Attachments include the following:

- Location Map Scale 1:50,000 Attachment A1 Map 1
- Site Location Map of WWTP Attachment A1 Map 2
- Site Layout Attachment A1 Map 3

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**SECTION B: GENERAL**

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

**B.1 Agglomeration Details**

<b>Name of Agglomeration:</b>	Churchtown & Environs
-------------------------------	-----------------------

**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>	Northern Division
	Annabella
	Mallow
	Co. Cork
<b>Tel:</b>	022 21123
<b>Fax:</b>	022 21983
<b>e-mail:</b>	Frank.cronin@corkcoco.ie

\*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>	Frank Cronin
<b>Address:</b>	Northern Division
	Annabella
	Mallow
	Co. Cork
<b>Tel:</b>	022 21123
<b>Fax:</b>	022 21983
<b>e-mail:</b>	Frank.cronin@corkcoco.ie

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

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

\*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>	Michael Cotter
<b>Address:</b>	Cork County Council Ballyadam Churchtown Co. Cork
<b>Grid ref (6E, 6N)</b>	150273E 113258N
<b>Level of Treatment</b>	Tertiary
<b>Primary Telephone:</b>	063-81348
<b>Fax:</b>	063-21439
<b>e-mail:</b>	Micahel.cotter@corkcoco.ie

\*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>	225mm diameter outfall pipe from wastewater treatment plant to Percolation Area
<b>Unique Point Code</b>	SW - 01 CHTN
<b>Location</b>	WWTP site Ballyadam, Churchtown
<b>Grid ref (6E, 6N)</b>	150281E 113298N

**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>	Not Applicable
<b>Unique Point Code</b>	Not Applicable
<b>Location</b>	Not Applicable
<b>Grid ref (6E, 6N)</b>	Not Applicable

**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
		√



**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>	225mm diameter outfall pipe from pumping station. Open pipe
<b>Unique Point Code</b>	SW - 02 CHTN
<b>Location</b>	Pumping Station at Churchtown
<b>Grid ref (6E, 6N)</b>	150315E 113552N

**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>
	√	

**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>	Planning Department County Hall Carriagrohane Road Cork
<b>Tel:</b>	021 4276891
<b>Fax:</b>	021 4867007
<b>e-mail:</b>	Planninginfo@corkcoc.ie

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

<b>has been obtained</b>	√	<b>is being processed</b>	
<b>is not yet applied for</b>		<b>is not required</b>	

<b>Local Authority Planning File Reference N<sup>o</sup>:</b>	Not Applicable
---	----------------

**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
		√

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>	North Cork Area Headquarters
	Gouldhill
	Mallow, Co. Cork
<b>Tel:</b>	022 30200
<b>Fax:</b>	022 30211
<b>e-mail:</b>	Gerry.oconnell.ie

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

Relevant Authority Notified	Yes	No
		√

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

Attachment included	Yes	No
		√

**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.

Attachment included	Yes	No
	√	

**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>	<b>990</b>
<b>Data Compiled (Year)</b>	<b>2009</b>
<b>Method</b>	<b>Hydraulic Flow</b>

**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.

*The current population equivalent being treated at Churchtown WWTP is 600 based on hydraulic flow assessments.*

*All developments with granted planning permission and all developments under construction have been included in the agglomeration. The additional p.e due to*

the granted planning permissions is estimated to be in the order of 390 p.e. There are currently one recently planning permission in relation to non domestic activities.

With the completion of the recently commissioned 1000 p.e WWTP the plant shall be capable of accommodating additional hydraulic and organic loading without posing an environmental risk to the receiving percolation area.

**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.

<b>Class of waste water discharge</b>	<b>Fee (in €)</b>
	€10,000

<b>Appropriate Fee Included</b>	<b>Yes</b>	<b>No</b>

**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.

Recently the WWTP and Pumping Station was upgraded at a cost of €0.5 M. These projects were upgraded under the Water Services Investment Programme 2002 -2006.

No further works are listed to be carried out under the current Water Services Investment Programme 2007 -2009

**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.

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

**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
		√

**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 Foreshore 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

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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.

## General Description of the Wastewater Treatment Plant

### Introduction

E.P.S. intend to provide a Waste Water Treatment Plant designed in accordance with BATNEEC and the Urban Waste Water Directive 1994.

The final effluent shall comply with the following discharge limit standards:

Parameter	Concentration (mg/l)
BOD <sub>5</sub> (mg/l)	5
Suspended Solids (mg/l)	5
COD(mg/l)	70

**TABLE 1 – EFFLUENT LIMITS DISCHARGE**

### Plant Description

The new Wastewater Treatment Works shall have an ultimate design flow of 1336.8m<sup>3</sup>/day (6 DWF) for a Population Equivalent of 936.

The E.P.S. proposal is based on a Conventional Extended Activated Sludge Treatment Plant.

The following provisions are incorporated in the design:

- Provision for 3 No. Inlet Pumps (Duty/Assist/Standby)
- Automatic Inlet 6 mm Fine Screen (55.7 m<sup>3</sup>/hr) including screenings disposal facility and a manual screen by-pass
- The Biological Treatment includes 1 No. Aeration tank and 1No. Settlement Tank
- Provision of 21 days on site sludge storage based 3% DS
- Tertiary treatment in the form of a sand filter and constructed wetlands

### **Inlet Works**

The inlet works shall be designed to cater for 936 PE and shall consist of:

- An Automatic Inlet screen that will remove solids in excess of 6 mm.
- A manually raked emergency bypass 6 mm bar screen.
- 3 No. Inlet Pumps (Duty/Assist/Standby)

The Automatic Inlet Screen will be able to cater for 55.7 m<sup>3</sup>/hr (6 DWF). All screenings are washed, separated and deposited in skips for removal off site.

An ultrasonic sensor provides level measurement. The transmitter for the flow meter is mounted in the main control panel in the Control building, complete with local flow indicator.

Flows up to 27.85 m<sup>3</sup>/hr (3 DWF) will receive full treatment. Flows in excess of 3 DWF will overflow from the Inlet Pump Sump to the Storm Holding Tank where it will be stored until storm conditions have subsided and will then be returned to the biological stream for treatment.

### **Biological Treatment**

E.P.S. propose the Conventional Extended Activated Sludge Process.

The aeration walls shall be contoured so as to give efficient movement of the tank contents and prevent solids accumulation and settlement. Fine Bubble Diffusers on both sides of the chamber inlet, to give a controlled mixing pattern within the tank which maintains the solids in suspension and prevents dead spots, shall introduce air.

The final settlement tank (Secondary Clarifier) shall be connected by inlet ports to the aeration tank. The clarifier walls have a slope of 7½° approximately to



prevent solids accumulation and ensure that settled solids move by gravity to the bottom of the clarifier.

The settled solids in the bottom of the clarifier hopper return to the Aeration compartment, by RAS pump. The clarifier is also equipped with a scum box to remove scum into sludge chamber by gravity from where it is pumped to the picket fence thickener.

The proposed Settling Tank shall be designed for a hydraulic loading of  $27.85\text{m}^3/\text{hr}$ , i.e.  $0.76\text{ m}^3/\text{m}^2/\text{hr}$  upward flow velocity, at a hydraulic loading of 3 DWF and a side wall of 3 m. Tanks are equipped with an inlet scum and sludge draw-off pipework, "V" notch weir plate and baffle-plate and scum collector.

The sludge return-pump shall then pump the sludge at a rate of 1 DWF and thus returns settled sludge to the start of the process (i.e. Aeration tank).

The proposed surplus sludge system consists of 2 No. surplus sludge pumps (duty/standby). Surplus sludge shall be pumped to the Sludge Holding Tank. The surplus sludge pumps shall be controlled via AC adjustable frequency drives using set points derived from the metered flows. The transmitter shall be located on the main control panel in the control building.

The plant incorporates a Sludge Holding Tank for the storage and mixing of surplus sludge @ 0.75% D.S from Settlement Tank.

The supernatant from the Sludge Holding Tank overflows by gravity to the adjacent waste return sump and shall be pumped to the inlet works for recycle through the process.

## **Tertiary Treatment**

### **Sand Filter**

In order to achieve the 10mg/l BOD and 10 mg/l SS, a tertiary sand filter in combination is required. The system proposed includes for automatic backwashing. The backwash is returned to the inlet works for recycling

### **Grass Plots**

To achieve the final discharge requirements of 5mg/l BOD and 5mg/l SS, constructed wetlands are used. Grass plots are man-made plots, which are specially designed for the treatment of wastewater. A carefully chosen selection of plants and a specially designed substrate provide the right biological environment for cleansing and reoxygenating the water. These plots are modelled on natural systems, but are designed to achieve optimum treatment efficiencies.

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**Design Calculations**

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**Inlet Works**

**Inlet Pump Sump**

<b>No. Inlet Pumps Required</b>	3 No. (Duty/Assist/Standby)
<b>Flow Rate (1 pump operating)</b>	28.8 m <sup>3</sup> /hr
<b>Flow Rate (2 pumps operating)</b>	36 m <sup>3</sup> /hr

**Inlet Screen**

<b>Maximum Flow:</b>	55.7 m <sup>3</sup> /hr
<b>No. Required:</b>	1 No. (duty)
<b>Screen Type:</b>	Automatic
<b>Aperture Size:</b>	6mm
<b>By-Pass Screen Size:</b>	6mm

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**Storm Tank**

<b>Volume Required</b>	50 m <sup>3</sup>
<b>No. Storm Pumps</b>	2 No. (Duty/Standby)
<b>Flow Rate</b>	27.85 m <sup>3</sup> /hr

**Biological Treatment**

**Aeration Tank**

BOD Load	56 kg BOD/d
[MLSS]	3,500 mg/L
F/M ratio	0.05 - 0.1 kg BOD/kg MLSS
No. Required	1
Aeration Volume	187 m <sup>3</sup> (19.6 h RT @ DWF)
Aeration Requirement	141 kg O <sub>2</sub> /d
Dimensions	∅ 7.30 m x 4.5 m side wall

**Blowers**

No. required	2 (Duty/Standby)
Flow Rate	110 Nm <sup>3</sup> /h
Pressure	500 mBar

**Settlement Tank**

No. Of Units	1 No.
Flow	9.28 m <sup>3</sup> /h
Flow 3 DWF	27.85 m <sup>3</sup> /h
Up flow	0.76 m/h
Volume	84.24 m <sup>3</sup>
Surface Area	36.95 m <sup>2</sup>
Retention Time	3 h @ 3 DWF
Dimensions	∅ 6.85 m x 3.0 m side wall

**RAS/WAS Pumps**

RAS Pumps	2 No. (Duty/Standby)
Flow Rate	9.28 m <sup>3</sup> /h (DWF)
Estimated WAS produced	56 kg DS/d

@ 0.75% 7.5 m<sup>3</sup>/d  
 WAS Pumps 2 No. (Duty/Standby)  
 Flow Rate 7.5 m<sup>3</sup>/hr

Note:  $\rho$  is assumed at 1,000kg/m<sup>3</sup>

**Sludge Holding Tank**

**Indigenous Sludge**

BOD load 56 kg BOD/d  
 Kg D.S./kg BOD 1.3  
 Sludge yield 43 kg  
 @ 3% DS 1.29 m<sup>3</sup>/d  
 Volume of Sludge Storage Tank 36 m<sup>3</sup>  
 No. Sludge Storage Tank Required 1  
 Dimensions (each) 4.27 m x 4.26m side wall  
 Dry Solids 3%  
 Retention time 27 days

Note:  $\rho$  is assumed at 1,000kg/m<sup>3</sup>

**Tertiary Treatment**

**Sand Filter**

Maximum Flow Rate 30m<sup>3</sup>/hr  
 BOD entering Sand Filter 25 mg/l  
 SS entering Sand Filter 35mg/l  
 BOD leaving Sand Filter 10 mg/l  
 SS leaving Sand Filter 10 mg/l

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**Grass Plots**

P.E. of scheme	936
Dry Weather Flow	238 l/P.E./day
Dry Weather Flow	222.8 m <sup>3</sup> /day
3 DWF	668.4 m <sup>3</sup> /day
	27.85 m <sup>3</sup> /hr
Max BOD of Secondary Effluent	10 mg/l
Max TSS of Secondary Effluent	10 mg/l
BOD Final Effluent Required	5 mg/l
SS Final Effluent Required	5 mg/l
Max Organic Loading	2.3 mg/l
Total Bed Area	900 m <sup>2</sup>
No. of beds	2
Area per bed	450 m <sup>2</sup>
Width of Constructed Wetland	15 m
Length of Constructed Wetland	30 m

**Process Design Guarantee**

The system described shall produce a final effluent within the consent levels outlined in the specification.

300 PE	Regulations		Design Offered based on
	No.	Design based on	
Flow	S.I. 419:1994	210 L/Person.d	238 L/Person.d
BOD Load	S.I. 419:1994	60g/Person.d	60g/Person.d
[BOD]	EPA WWT Manuals	100-300 mg/L	261 mg/L (*)
SS	EPA WWT Manuals	100-350 mg/L	280 mg/L (*)
F/M	EPA: Report 1998	0.04 – 0.2 kg BOD/kg MLSS	0.1
MLSS	EPA WWT Manuals	2,000-6,000 mg/L	3,500 mg/L
Sludge Production	EPA WWT Manuals	0.5 - 1.0 kg DS/kg BOD	1.2

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## General Description of Pumping Station

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Co-ordinates: 150240E, 113508N

Raw effluent from combined sources flows into the 1.9metre diameter, 3metre deep Pump Sump located upstream of the new treatment plant. A automatic screen is situated on the inlet line to the sump, which removes all rags/debris etc, preventing clogging of the pumps.

The sump is fitted 3No submersible pumps operating in duty/standby/Standby configuration. Each pump is provided with a hand off auto key on its respective starter. Selecting auto control will enable control by the U/S, provided the following conditions apply;

- Starter is powered up.
- Local emergency stop is not operated.
- Motor protection devices are not operated.

In automatic operation, in the event that the duty pump fails, the standby pump shall be started automatically, provided both pumps are selected to auto and available for operation.

Automatic changeover of the duty pumps will be every 8 hours. The inlet pumping sump is fitted with an ultrasonic level sensor which controls the operation of the pumps. The control set points are as follows;

- Set point 1                      Cut in of Duty Pump
- Set point 2                      Cut out of Duty Pump
- Set point 3                      High level alarm

A low level float switch will activate a low level alarm and cut out the pumps. If the high or low level alarms are activated, an orange beacon will flash on the control kiosk and a text message will be sent to the curator, stating the fault. Should the fault persist, effluent will overflow at a high level to the adjacent un-named Stream.

**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.

*Primary Discharge Point, SW-01 Churchtown*

<b>Type of Discharge</b>	225mm diameter concrete outfall pipe from wastewater treatment plant to a constructed percolation area adjacent to the WWTP
<b>Unique Point Code</b>	SW - 01 CHTN
<b>Location</b>	WWTP site Ballyadam, Churchtown
<b>Grid ref (6E, 6N)</b>	150281E 113298N

The primary discharge point, SW-01 Churchtown, is the main outlet from Churchtown Wastewater Treatment Plant. The effluent gravities via the UV Treatment Unit at the WWTP and discharges to an constructed percolation area adjacent to the treatment plant site.

*Storm Water Overflow Point, SW-02 Churchtown*

<b>Type of Discharge</b>	Emergency overflow – 225mm diameter concrete pipe
<b>Unique Point Code</b>	SW 02 - CHTN
<b>Location</b>	Pumping Station at Churchtown Village
<b>Grid ref (6E, 6N)</b>	150315E 113552N

The secondary discharge point, SW-02 Churchtown, is a 225mm uPVC overflow pipe. The outlet from the pumping station runs in a westerly direction for a distance of 30m to an unnamed stream which joins the Awbeg River.

**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
		√



**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:**

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING
SW-01 - CHTN	Primary	Cork County Council	Percolation Area	Not Applicable	Not Applicable	150281	113298
SW-01 - CHTN	Storm	Cork County Council	Stream	Un-named	None	150315	113552

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.

*Lab Sampling and testing is done in accordance with 'Sampling Methods for examination of water and wastewater' 18<sup>th</sup> edition 1992.*

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

Attachment included	Yes	No
		√

**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
SW01	Primary	SAMPLING	150273	113258	N
aSW01u	u/s	Sampling	150454	113195	N
aSW01d	d/s	Sampling	150328	115578	N

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

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*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://78.137.160.73/epa\\_wwd\\_licensing/](http://78.137.160.73/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**.

*The plant is performing satisfactorily at present and operating within the requirements of the following legislation. As the plant has been recently upgraded there are no improvements planned at present for the Churchtown Wastewater Treatment Plant. Churchtown WWTP discharges to a percolation area adjacent to a un-named stream which is a tributary of the Awbeg River. The distance from the discharge point at the WWTO to the confluence of the stream and the Awbeg River is 2Km.*

### **Water Quality Standards**

*The Water Framework Directive (WFD) aims to establish an integrated approach to water protection, improvement and sustainable use. In order to achieve the requirements of the WFD, Ireland has been divided into a number of River Basin Districts or management units. The South Western River Basin District (SWRBD) comprises substantially the counties of Cork and Kerry, all of Cork City, and also parts of counties Limerick, South Tipperary and Waterford.*

*The Awbeg River is included in the SWRBD. The overall objectives of the SWRBD project include the following:*

- *Strengthen compliance with EU Directives and national legislation*
- *Collect and analyse information to determine water quality and identify possible threats to water status*
- *Prevent further deterioration and protect/enhance water quality*
- *Develop a programme of measures to address all significant pressures and sources of impact on aquatic ecosystems and groundwater*
- *Encourage and facilitate public participation including the maintenance of a project website*
- *Promote sustainable water use*

*In order to achieve these objectives the following project tasks have been identified:*

- *Identify pressures on water bodies and assess risk of not achieving compliance with the Water Framework Directive*
- *Prepare a Characterisation Report*
- *Identify Heavily Modified (HMWB) and Artificial Water Bodies (AWB)*
- *Establish risk to waters from Hazardous Substances*
- *Establish data management system and GIS*
- *Prepare programme of measures*
- *Review of monitoring needs*
- *Design monitoring programme*
- *Prepare River Basin Management Strategy*
- *Assist public participation in the project*
- *Prepare printed reports*
- *Assist capacity building*

*The SWRBD has proposed water quality standards for the Awbeg River under a water quality / catchments management plan. The Awbeg is classified as Poor*

ecological quality status on the ground of biological quality data. Note also this is located in a *Margaritifera margaritifera* (freshwater pearl mussel) which is a protected area and for such sites the water quality standards that need to be achieved will be higher than for other areas as these are a species of high conservation importance.

The River Basin Management System currently being developed will include a programme of measures and a River Basin Management Strategy, designed to achieve at least good status for all waters by 2015, and to maintain high status where it exists. Therefore discharges from Churchtown Wastewater Treatment Plant cannot cause deterioration in good water quality under the Water Framework Directive at present.

The Awbeg River is not a designated Shellfish area under the Shellfish Waters Regulations, S.I.200 of 1994. The River Blackwater, into which the Awbeg River flows, is also not designated under these regulations.

The Awbeg River is not designated a Salmonid Water under Salmonid Water Regulations, S.I. 293 of 1988, however the River Blackwater which the Awbeg River joins, is designated Salmonid Water under Salmonid Water Regulations, S.I. 293 of 1988.

The Awbeg River is not designated a Bathing Water under the Bathing Water Regulations, S.I. 178 of 1998 as amended.

The Awbeg River is not a designated Sensitive Area under the Urban Wastewater Treatment Regulations 2001 (S.I. 254 of 2001). The River Blackwater downstream of Mallow Railway to Ballyduff Bridge is a designated Sensitive Area. This is not within 2km of any discharge point from Churchtown Wastewater Treatment wastewater works.

Downstream of the discharge points, the Awbeg River traverses through Buttevant, Doneraile and Castletownroche villages. Water is not abstracted from the Awbeg River for any of these villages. However three Public Water Supplies are located adjacent to the Awbeg River. The nature of the source of these three supplies is a Spring Supply.

The Three Spring Supplies are shown in the table below:

Name	Volume	Source Type	Easting	Northing
Doneraile - Clogher	2000m <sup>3</sup> /d	Spring	166488	107193
Castletownroche Nr 1	650m <sup>3</sup> /d	Spring	168350	103520
Castletownroche Nr 1	600m <sup>3</sup> /d	Spring	168450	103590

### Areas of Conservation

The Department of the Environment, Heritage and Local Government is responsible for the designation of conservation sites in Ireland. It is required under European law and national laws to conserve habitats and species, through designation of conservation areas under Special Areas of Conservation, Natural Heritage Areas and Special Protected Areas.

#### Special Areas of Conservation



Candidate Special Areas of Conservation (cSACs) are protected under the European Union (EU) Habitats Directive (92/43/EEC), as implemented in Ireland by the European Communities (Natural Habitats) Regulations, 1997.

The Blackwater River cSAC (Site Code: 002170) is very large, extending from the tidal estuary of the river at Youghal Co. Cork to the upper tributaries and their flood plains, in Cos. Cork Kerry, Limerick, Tipperary and Waterford, including the Awbeg River is a designated Special Area of Conservation.

The cSAC is designated on the basis of the presence of a large number of EU Habitats Directive Annex 1 habitats and Annex 2 species. Many of these are estuarine habitats and species found only in the lower reaches of the River Blackwater, however a number may be present in the Awbeg River section of the cSAC including, for example the Annex 1 habitats, 'alluvial wet woodlands', 'floating river vegetation', and 'old oak woodlands'; and the Annex 2 species sea lamprey, river lamprey, brook lamprey, Atlantic salmon, freshwater pearl-mussel and otter.

The Blackwater River Site Synopsis is included in this attachment.

#### **Natural Heritage Areas**

The Awbeg River does flow through a Proposed Natural Heritage Areas (NHA). Natural Heritage Areas are the basic designation for wildlife. An NHA is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection.

Under the Wildlife Amendment Act 2000, NHAs are legally protected from damage from the date they are formally proposed for designation.

#### **Special Protected Areas**

Special Protection Areas (SPAs) are designated in order to safeguard certain habitats pursuant to EU Directive requirements. The EU Birds Directive (79/409/EEC) requires designation of SPAs for listed rare and vulnerable species, migratory species and wetlands.

No designated special protected areas are located along the Awbeg River. There are areas of the River Blackwater that are designated SPAs, however these are located downstream of Fermoy and therefore greater than 2km from all discharge points.

#### **Receiving Water Quality Requirement**

Water Quality analysis data for the Awbeg River was obtained from Cork County Council. The EPA also takes samples from a number of locations along the Awbeg River, however some of these are located after Doneraile and Castletownroche WWTP's discharge point. In the vicinity of the treatment plant, three nr monitoring stations are relevant to Churchtown WWTP. These stations are the following:

- Annagh Bridge - upstream of the confluence of water bodies by approximately 1.4km
- Bridge d/s of Scart Bridge - downstream of confluence of water bodies by approximately 2.6km

Table F1-1: Biological Quality Rating for Awbeg River - Upstream & Downstream of the confluence of the water bodies

Sampling Location	EPA Biological Quality Rating (Q values)		
	1995 -1997	2001 - 2003	Target
Annagh Bridge	3	3	3-4
Br d/s of Scart Br	3 - 4	4	4

The Royal Commission in its report on Water Quality Guidelines recommends that "in all circumstances effluent discharges which are calculated to raise the BOD of the receiving water, outside the mixing zone, by more than 1 mg/l should be discouraged". The average existing background level for BOD is estimated at 1mg/l. Therefore the receiving water limiting value for BOD for this river is 2mg/l.

The standard water quality requirements for dangerous substances are based on the Water Quality (Dangerous Substances) Regulations 2001.

Hence, the principal receiving water quality requirements are given in Table 3 below: -

Table F1-2: Receiving Water Quality Limiting Values

Parameter	Water Quality Standard (mg/l)
Chromium	30
Copper	30
Lead	10
Nickel	50
Zinc	100

**Based on Hardness of receiving waters >100mg/l CaCO<sub>3</sub>**

#### Effluent Standards

The treated effluent quality requirements shown in the table below are determined with respect to the EC Urban Wastewater Directive, given effect in Irish Law by S.I.254 of 2001.

Table F1-3: Minimum Effluent Standards based on S.I.254 of 2001 and Recorded Effluent Concentrations

Parameter	Effluent Standards (mg/l)	Actual Concentrations* (mg/l)
Biological Oxygen Demand (BOD)	25	13.5
Suspended Solids (SS)	35	3.9

\*Actual Concentration is the average effluent concentrations recorded at the outlet of the WWTP by Cork County Council Wastewater Laboratory during the period Dec '08 to May '09.

Assimilative Capacity Calculations were not performed for the WWTP as the effluent following tertiary treatment (via sand filters & UV channel) is discharged to ground via a constructed percolation area, The Percolation Area is adjacent to the WWTP and bounds a un-named stream.

Chareville Public Water Scheme, located at Ballynageragh Townland, is the closest PWS that utilise ground water for medium sized water supplies. This PWS is located approximately 3.2Km from the WWTP at Churchtown.

There are no public water schemes located in the village or adjacent to the discharge area. The village of Churchtown is supplied by Chareville PWS and there are no known private wells in the vicinity of the percolation area at Churchtown WWTP.

### **Discharges in proximity of Wastewater Works**

Water quality analysis data presented in Tables 4 & 5 below was recorded by Cork County Council wastewater laboratory and covers a sampling period from April 2008 to July 2008.

Table F1-4: Upstream Water Quality

Parameter	Upstream Monitoring Station			
	19/03/09	17/04/09	14/05/09	25/05/09
Ph	7.5	7.5	7.4	7.6
BOD	<2	3	2	2
SS	11	12	4	3
Ammonia	<0.05	0.07	0.06	0.1
Ortho-Phosphate	0.05	0.06	0.07	0.025

Table F1-5: Downstream Water Quality

Parameter	Upstream Monitoring Station			
	19/03/09	17/04/09	14/05/09	25/05/09
Ph	7.5	7.6	7.5	7.3
BOD	2	2	2	2
SS	3	2	4	3
Ammonia	<0.05	0.07	0.07	0.26
Ortho-Phosphate	0.05	0.06	0.07	0.25

The data in the above tables confirms the wastewater discharge has no effect on the overall river quality.

### **Appropriate Assessments**

The development is in the surface water catchment of the River Blackwater, SAC 002170. In accordance with EPA Circular L8/08 Appendix 1, the project must be screened for its impacts. However, due to financial constraints, Cork County Council does not have the resources for the foreseeable future to assess the impacts in accordance with the EPA document, 'Waste Water discharge Licence - Appropriate Assessment'.

<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.

ABS_CD	AGG_SERVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

**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.

*There are no drinking water abstraction points downstream or downgradient of the discharge point.*

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

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## **SECTION G: PROGRAMMES OF IMPROVEMENTS**

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*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).

*The plant is operating satisfactory at present and is operating within the requirements of the relevant legislation, outlined above. Recent improvements include the construction and commissioning of the new 1000 PE WWTP and upgraded Pumping Station.*

### **Water Framework Directive 2000/60/EC**

*The Water Framework Directive (WFD) aims to establish an integrated approach to water protection, improvement and sustainable use. In order to achieve the requirements of the WFD, Ireland has been divided into a number of River Basin Districts or management units. The South Western River Basin District (SWRBD) comprises substantially the counties of Cork and Kerry, all of Cork City, and also parts of counties Limerick, South Tipperary and Waterford.*

*The overall objectives of the South Western River Basin District project include the following:*

- *Strengthen compliance with EU Directives and national legislation*
- *Collect and analyse information to determine water quality and identify possible threats to water status*
- *Prevent further deterioration and protect/enhance water quality*
- *Develop a programme of measures to address all significant pressures and sources of impact on aquatic ecosystems and groundwater*
- *Encourage and facilitate public participation including the maintenance of a project website*
- *Promote sustainable water use*

*In order to achieve these objectives the following project tasks have been identified:*

- *Identify pressures on water bodies and assess risk of not achieving compliance with the Water Framework Directive*

- Prepare a Characterisation Report
- Identify Heavily Modified (HMWB) and Artificial Water Bodies (AWB)
- Establish risk to waters from Hazardous Substances
- Establish data management system and GIS
- Prepare programme of measures
- Review of monitoring needs
- Design monitoring programme
- Prepare River Basin Management Strategy
- Assist public participation in the project
- Prepare printed reports
- Assist capacity building

The EPA also takes samples from one location along the Awbeg River downstream (d/s) of the WWTP and after the confluence of the waterbodies. These are located at the following:

- Bridge d/s Scart Bridge

Table G1-1: Upstream Water Quality

Parameter	Upstream Monitoring Station			
	19/03/09	17/04/09	14/05/09	25/05/09
Ph	7.5	7.5	7.4	7.6
BOD	<2	3	2	2
SS	11	12	4	3
Ammonia	<0.05	0.07	0.06	0.1
Ortho-Phosphate	0.05	0.06	0.07	0.025

Table G1-2: Downstream Water Quality

Parameter	Upstream Monitoring Station			
	19/03/09	17/04/09	14/05/09	25/05/09
Ph	7.5	7.6	7.5	7.3
BOD	2	2	2	2
SS	3	2	4	3
Ammonia	<0.05	0.07	0.07	0.26
Ortho-Phosphate	0.05	0.06	0.07	0.25

The data in the above tables confirms the wastewater discharge has no effect on the overall river quality.

### Birds Directive 79/409/EEC

Special Protection Areas (SPAs) are designated in order to safeguard certain habitats pursuant to EU Directive requirements. The EU Birds Directive (79/409/EEC) requires designation of SPAs for listed rare and vulnerable species, migratory species and wetlands.

No designated special protected areas are located along the Awbeg River. There are areas of the River Blackwater which are designated SPAs however these are located downstream of Fermoy and therefore, greater than 2km from all discharge points.

### **Groundwater Directives 2006/118/EC**

The Groundwater Directive 2006/118/EC has been developed in response to the requirements of Article 17 of the Water Framework Directive: Strategies to prevent and control pollution to groundwater. Groundwater Quality standards are to be established by the end of 2008.

Chareville Public Water Scheme, located at Ballynageragh Townland, is the closest PWS that utilise ground water for medium sized water supplies. This PWS is located approximately 3.2Km from the WWTP at Churchtown.

With the proper mitigation measures in place the operation of the wastewater treatment plant does not have any significant negative impacts on the existing groundwater.

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

There are no areas along the Awbeg River or River Blackwater downstream of Churchtown WWTP designated for the abstraction of water intended for human consumption.

### **Urban Waste Water Treatment Directive 91/271/EEC**

The Urban Wastewater 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 the various requirements in relation to the collection and treatment of urban wastewater.

Article 4(1)(c) states that "In the case of urban wastewater 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 equivalent of between 2,000 and 10,000."

The Churchtown Wastewater Treatment Plant was commissioned in 2007 and was designed to treat effluent to a 25/35ppm standard.

The Second Schedule (Part 1) of the 2001 Regulations states that effluent should be treated to the following standards.

Table G1-3: Minimum Effluent Standards based on SI 254 of 2001

<b>Parameter</b>	<b>Conc. (mg/l)</b>	<b>Minimum Percentage of Reduction</b>
Biochemical Oxygen Demand (BOD)	25	70 - 90
Chemical Oxygen Demand (COD)	125	75
Suspended Solids	35	90

The aeration and clarifying plant at the new Churchtown wastewater treatment plant is treating effluent to a high standard. Efficiencies of BOD, COD and SS

removal for the plant is typically in excess of 85%. The effect of the discharges on the quality of the receiving waters is assessed in Attachment F1.

The Third Schedule of the 2001 Regulations gives a list of Sensitive areas.

Article 4(2)(a) states that all discharges into Sensitive Areas require more stringent treatment than secondary treatment. The Awbeg River is not a designated Sensitive Area. The River Blackwater downstream of Mallow Railway Bridge to Ballyduff Bridge is designated a Sensitive Area. This is not within 2km of any discharge point from the Churchtown wastewater treatment works.

The Fifth Schedule of the 2001 Regulations gives a methodology for monitoring the final effluent from the wastewater treatment plant. Item 3 states "The minimum annual number of samples shall be determined according to the size of the treatment plant and be collected at regular intervals during the year." For a PE of between 2000-9999 4 samples should be taken each year. Cork County Council wastewater laboratory carries out regular testing at the outlet of the treatment plant.

#### **Shellfish Directive 79/923/EEC**

The Awbeg River is not a designated Shellfish Area under the Shellfish Waters Regulations, S.I. 200 of 1994. The River Blackwater is also not designated under these regulations.

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

Candidate Special Areas of Conservation (cSACs) are protected under the European Union (EU) Habitats Directive (92/43/EEC), as implemented in Ireland by the European Communities (Natural Habitats) Regulations, 1997.

The Blackwater River cSAC (Site Code: 002170) is very large, extending from the tidal estuary of the river at Youghal Co. Cork to the upper tributaries and their flood plains, in Cos. Cork Kerry, Limerick, Tipperary and Waterford.

The cSAC is designated on the basis of the presence of a large number of EU Habitats Directive Annex 1 habitats and Annex 2 species.

The Blackwater River Site Synopsis is included in this attachment.

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

The Environmental Liability Directive is about preventing and remedying environmental damage. It aims to hold operators whose activities have caused environmental damage financially liable for remedying this damage, and it aims to hold those whose activities have caused an imminent threat of environmental damage liable for taking preventive actions.

Cork County Council Wastewater Laboratory carries out monitoring of the effluent from the wastewater treatment plant on a regular basis.

Failure to meet the specified treated effluent standards may result in final penalties to Cork County Council. As a result, the risk of environmental pollution from the treatment plant may be reduced.

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



The Awbeg River is not designated a Bathing Water under the Bathing Water Regulations, S.I. 178 of 1998 as amended.

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

The level of dangerous substances in both the effluent discharged from Churchtown wastewater treatment plant and the river itself is significantly lower than the concentration limits set in the directive.

**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.

Attachment included	Yes	No
	√	

**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.

**Receiving Water Quality Requirement based on Phosphorus Regulations 2008**

The effluent arising from the WWTP is discharge to the Percolation Area which is adjacent to a stream which is a tributary of the Awbeg River. The Awbeg River is a tributary of the Blackwater River (Munster).

The EPA have three number stations on the Awbeg River, upstream along the Awbeg the Q value of the river is 4 at the one locations, while downstream of the River the Q value is 4. Buttevant, Doneraile & Castletownroche agglomerations discharge downstream of Churchtown Agglomeration.

**Effluent Standards**

The treated effluent quality requirements are determined with respect to the EC Urban Wastewater Directive, given effect in Irish Law by S.I.254 of 2001. The wastewater treatment processes should reduce nutrients in the final effluent. The minimum effluent standard based on S.I.254 of 2001 for Phosphorus in wastewater effluent is 2mg/l.

As a natural consequence of secondary treatment, there will be an uptake of phosphorous for biomass synthesis at the wastewater treatment plant in

Churchtown. This is evident from Tables 3 & 4 below showing the uptake of phosphorus through the wastewater treatment plant.

Table G2-3: Phosphorus Levels in Influent to WWTP

Parameter	Inlet Monitoring Station	
	09/07	07/08
Ortho-Phosphate	4.49	4.46

Table G2-4: Phosphorus Levels in Effluent from WWTP

Parameter	Outlet Monitoring Station	
	09/07	07/08
Ortho-Phosphate	3.14	3.74

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

Attachment included	Yes	No

### 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.

Recently the WWTP and Pumping Station was upgraded at a cost of €0.5 M. These projects were upgraded under the Water Services Investment Programme 2002 -2006.

No further works are listed to be carried out under the current Water Services Investment Programme 2007 -2009

With these recent improvements to the collection system and WWTP it will 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.

Attachment included	Yes	No

### 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.

There are programme of improvements planned on the Storm Overflows within the Agglomeration.

**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.

Attachment included	Yes	No
		√

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