Comhairle Contae Chorcaí Cork County Council

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



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

22nd September 2008,

Re: Waste Water Discharge Licence Application for the Agglomeration of Castlemartyr, Co. Cork

Dear Sir / Madam,

uy: any other Please find enclosed Cork County Councils Waste Water Discharge Licence Application for the agglomeration of Castlemartyr.

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.

Patricia Power Director of Services.

Consent of convitation of the required for any other use.

This is a draft document and is subject to revision.



Waste Water Discharge Licence Application Form



Environmental Protection Agency

PO Box 3000, Johnstown Castle Estate, Co. Wexford Lo Call: 1890 335599 Telephone: 053-9160600 Fax: 053-9160699 Web: <u>www.epa.ie</u>Email: info@epa.ie

Tracking Amendments to Draft Application Form

Version	Date	Amendment since	Reason
No.		previous version	
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'.	To accurately reflect the information required
		Amend wording of Checklist in Annex to reflect wording of Regulation 16(5) of S.I. No. 684 of 2007.	To accurately reflect the Regulations and to obtain the application documentation in appropriate format.
		Inclusion of unique point code for each point of discharge and storm water overflow.	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.	To accurately determine the agglomeration to be licensed.
		Amend wording of Section B.7. (iii) to reflect the title of Water Services Authority.	To accurately reflect the Water Services Act, 2007.
		Addition of new Section B.9 (ii) in order to obtain information on developments yet to contribute to the waste	To obtain accurate population equivalent figures for the agglomeration.
		water works. Addition of sub-sections C.1.1 & C.1.2 in order to	To obtain accurate information on design and spill frequency from these structures.
		for Storm water overflow and pumping stations within the works.	To acquire information on the population loading
		Amend Section D.1 to include a requirement for monitoring data for influent	onto the plant and to provide information on performance rates within

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		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.	To clarify the reporting requirements.
		Amended requirements for reporting on discharges under E.1 Waste Water Discharge Frequency and Quantities.	To streamline reporting requirements.
		Amendment to Section F.1 to specify the type of monitoring and reporting required for the background environment.	to clarify the reporting requirements for ambient monitoring.
		Removal of Annexes to application form.	To reflect the new web based reporting requirements.
		Consent of cot.	

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

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Waste Water Discharge Authorisation Application Form

Section	Attachment	Title	<u>No. of</u> Pages	Type
Section	Attachment	<u></u>	<u>rayes</u>	<u>1906</u>
Α		Non-technical Summary		
	A1 Map 01	Castlemartyr Location Map	1	Мар
	A1 Map 02	Layout of Castlemartyr Sewerage Scheme	1	Мар
	A1 Map 03	Castlemartyr Waste Water Treatment Plant Site Layout	1	Мар
В		General		
	B1 Map 04	Castlemartyr Layout Plan Indicating Agglomeration	1	Мар
	B2 Map 05	Castlemartyr Waste Water Treatment Plant Site Plan	1	Мар
	B2 Map 06	Castlemartyr Sampling Locations Opstream and Downstream	1	Мар
	B2 Map 07	Castlemartyr WWTP Roposed Discharge Rising Main Route and Outfall	1	Мар
	B3 Map 08	Castlemartyr Waste Water Treatment Plant Monitoring Locations for the Primary Discharge	1	Мар
	B4 Map 09	Castlemartyr Waste Water Works Secondary Discharge Locations	1	Мар
	B5 Map 10	Castlemartyr Waste Water Works Storm Water Overflow Discharge Locations	1	Мар
	B8a	Castlemartyr WWDL Application Site Notice	1	Text
	B8b	Castlemartyr WWDL Application Newspaper advertisement	1	Text
	B8 Map 11	Site Notice Locations	1	Мар
	B10a	DHELG Letter	1	Letter
	B10b	Water Services Investment Programme 2007-2009 – Cork County	1	List

ANNEX 1: TABLES/ATTACHMENTS

Waste Water Discharge Authorisation Application Form

С		Infrastructure and Operation		
	C1 Drawing 01	Castlemartyr Waste Water Treatment Plant Site Plan	1	Drawing
	C1 Drawing 02	Castlemartyr Main Road Pump Station Process Flow Diagram	1	Drawing
	C1 Drawing 03	Waste Water Treatment Plant Process Flow Diagram	1	Drawing
	C2 Drawing 04	Castlemartyr Waste Water Works Discharge Locations	1	Drawing
D		Discharges to the Aquatic Environment		
	D1	Discharges to Surface Waters		Tables
	D2	Tabular Data on Discharge Points	1	Table
E		Monitoring		
	E1	Waste Water Discharge Frequency and Quantities – Existing & Proposed		Tables
	E2	Monitoring and Sampling Points		Text
	E3	Tabular data on Monitoring and Sampling	1	Table
	E4	Tables		Table
F		Existing Environment and Impact of the Discharges		
	F1	Details of all monitoring of the receiving water	4	Tables
	F1 MAP 12	Castlemartyr WWTP Discharge Location and Proposed Shellfish Designation in Youghal Bay	1	Мар
G		Programmes of Improvements		

ABOUT THIS APPLICATION FORM

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.

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.

PROCEDURES

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: <u>*Drawings.*</u> *The following guidelines are included to assist applicants:*

- All drawings submitted should be titled and dated.
- All drawings should have a <u>unique reference number</u> and should be signed by a clearly identifiable person.
- All drawings should indicate a scale and the <u>direction of north</u>.
- 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.

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 Nº A.1

A Description of the Waste Water Works and the Activities Carried Out Therein.

Castlemartyr is located in East Cork (as shown in Appendix A1-MAP 01). The wastewater in Castlemartyr is collected in a partially combined drainage network and sewered to a terminal pumping station on Main Road (as shown in Appendix A1-MAP 02). Two submersible pumps (one duty the other assist) housed in the pump station pump the waste water forward to the treatment plant at a rate between 5m³/h and 120m³/hr (8DWF). Flows in excess of 120m³/hr entering the pumping station are overflowed into the adjacent Kiltha River.

Foul sewerage from the new Capella development, situated next to the treatment plant is collected in a private system and pumped from a private pumping station into the inlet sewer at a new manhole near the treatment plant boundary (as shown in Appendix A1-MAP 03).

There is no storm water holding tank at the treatment plant. The pumps regulate the inflow to the plant. All waste water entering the plant is screened at the inlet works. Flows up to $50m^3$ /hr are pumped forward by the on site pumping station to full treatment. Flows above $50m^3$ /hr are overflowed by gravity to the nearby Kiltha River. The plant is located to the south of Castlemartyr town.

The plant has a nominal capacity of 2,000 Population Equivalent (PE), treats flows to a secondary standard (fine bubble aeration), with discharge treatment standards in place for a 25 mg/l BOD, 35 mg/l SS and 125 mg/l COD effluent. The treated effluent is discharged to the Kiltha River, which runs approximately 100m to the West of the site.

The treatment plant consists of: inlet works; inlet pump station housing two pumps, one duty, the other standby; Aeration tank with fine-bubble aeration; Clarifier with half bridge scraper; a RAS/SAS pump; outlet chamber; sludge thickening tank with picket fence thickener (including a submersible pump for dewatering); and associated buildings including a control kiosk and mess room / storage building (as shown in Appendix A1-MAP 03).

Castlemartyr WWTP is currently operated by a private operator under a 10 year Operation and Maintenance Contract (Commenced September 2006). The plant manager visits the plant a minimum of two times per week. The contractor is known to visit the site once a day, especially in wet weather.

The Sources of Emissions from the Waste Water Works

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

- The local population;
- Local Industries, commercial and non-domestic users.

The pollution load from these sources varies greatly with daily, weekly and seasonal producers of waste water. The waste water from all sources is collected within the public sewer, which conveys the waste water to a terminal pump station on Main Street, where the waste water is pumped to the WWTP. The exception is a new development called the Capella Hotel and Leisure Centre adjacent to the WWTP, which pumps its waste water into the inlet sewer just outside the WWTP.

The domestic population of Castlemartyr has grown rapidly over the last three censuses. The most recent census figures show that the population of Castlemartyr in 2006 was 978 (Census, 2006). With recent growth, including large developments, such as the Capella development adding to the population, the current estimated residential population is approximately 1685. Other sources of influent that contribute to the sewerage scheme would be:

- Commercial premises
- Schools
- Tourism

Other potential emissions from the waste water treatment works include:

- Odour generated from the treatment process there have been no recorded issues to date.
- Noise pollution minor during normal operation. Increased temporarily during sludge tank pump-out. There have been no complaints regarding noise at the plant.

The Nature of 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.

All effluent, treated and overflow, is discharged to the Kiltha River. At design capacity, the treatment plant will discharge 360 m³/d of treated effluent into the river. The final discharge from the plant is a combination of the treated effluent and any storm water or emergency overflows from the inlet works. The pump station on Main Road has a storm water / emergency overflow that discharges to the Kiltha.

Analysis of the effluent discharging from the plant (both treated and any overflows combined), during the period January 2007 – April 2008, indicates that the discharge is in accordance with the orban Waste Water Treatment Directive Standards for BOD and COD. The SS regulation value was not achieved; however the raw data indicates two reactings, one of 300 mg/l, the other 102 mg/l where storm water overflows may have been the cause of the increased concentrations.

With continual growth in the area anticipated, the WWTP requires expansion to cater for future loadings. The current proposal is to increase capacity at the plant to 3,000 PE, to provide for storm water holding tank at the WWTP, and to pump the treated effluent for disposal to a proposed sea outfall at Ballycotton Bay. This upgrade will remove treated effluent discharges to the river, and reduce the potential for overflows into the Kiltha River, reducing negative impacts on the environment. The discharge at Ballycotton Bay will be managed, and will be in accordance with the applicable Regulations and Standards. In addition, all overflows will be screened through 6mm screens.

In accordance with the Sludge Management Plan for County Cork (March 2000), sludge produced at Castlemartyr will be transported to the Midleton sludge plant (or where otherwise directed by Cork County Council) for dewatering prior to being transported to Ballincollig WWTP for thermal drying, to produce a biosolid product, suitable for sustainable reuse.

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

Technologies

The inlet pump station at Castlemartyr WWTP has two pumps, one duty the other standby. The pump station at Main Road also has two pumps, one duty, and the other assist. In the event of power failure the operator is able to connect a mobile generator to power the pumps. This enables continued wastewater and sludge treatment, thereby reducing untreated emissions from entering the receiving aqueous environment.

Techniques

A Performance Management System (PMS) is in place at the Castlemartyr Waste Water Treatment Plant. This PMS was developed by the Water Services National Training Group (WSNTG). 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, and to maintain the design performance capability of the existing treatment plant.

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

These measures apply at the treatment plant operated by the operator (EPS) and not to the network or pump stations.

As part of the operator's contract, failure to meet specified final effluent quality standards results in financial penalties due to non-compliance. The penalties vary depending on the severity of the pollution caused.

Prevention of pollution

Any alteration / upgrading of the existing infrastructure undertaken by the operator shall not increase the potential to cause pollution in the environment. In particular, any alterations to the wastewater treatment plant will be designed to enable any operator of the facility to prevent pollution of the environment by the following potential contaminants:

- Surface water run-off
- Spillages
- Solid Waste

Toxic Substances

The current operator is to ensure that any modification or alterations to the plant do not increase the impact by any toxic substances. All chemicals and dangerous substances must be stored safely at all times and all appropriate safety measures must be taken to ensure against leakage and spillage in accordance with the relevant health and Safety Legislation.

Proposed Works

Upgrading of the existing waste water treatment plant including expansion to cater for a capacity of 3000PE, installation of a storm water holding tank and pumping of the treated effluent to Ballycotton Bay for discharge has been proposed by Cork County Council, in order to cater for the current and future loads. These upgrades will reduce the potential to cause pollution in the environment.

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 Regulation, 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 operations performance. Samples are collected monthly 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 minimises degradation between collection and analysis. Certain heavy metal analyses are also required on an annual basis as identified in the '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.

Composite samples are collected weekly and these are fixed, stored and handled as per standard methods. Analysis of the samples (both operators 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.

SECTION B: GENERAL

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

B.1 Agglomeration Details

Name of	Agglomeration:	CASTLEMARTYR

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.

Name*:	Cork County Council	Southern Division
Address:	County Hall	.¢.*
	Carrigrohane Road	at HE
	Cork	OTTE
		ally any
Tel:	021 4276891	et ator
Fax:	021 4276321	110 Julee
e-mail:		The reat

*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. قي ج

Name*:	Patricia Power 🔊
Address:	Director of Services: Operational Water Services
	Floor 5 (Tower)
	County Hall
	Cork
Tel:	021 4285285
Fax:	021 4276321
e-mail:	Patricia.power@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

Name*:	Not applicable
Address:	
Tel:	
Fax:	
e-mail	

e-maii:

*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

Name*:	EPS LIMITED
Address:	Quartertown Industrial Estate
	Mallow
	Co. Cork
Tel:	022 31200
Fax:	022 31250
e-mail:	info@espireland.com

*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 (≤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
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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.

Name*:	Madeleine Healy
Address:	Castlemartyr Waste Water Treatment Plant
	Bridgetown
	Castlemartyr
	Co. Cork 🕐
Grid ref	196303E, 72884N
(6E, 6N)	
Level of	Secondary
Treatment	
Primary	021 428 5233
Telephone:	
Fax:	021 427 6321
e-mail:	Madeleine.Healy@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 georeferenced 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
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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.

Type of	Pipe to river.
Discharge	
Unique	SW01CMYR
Point Code	
Location	Bridgetown, Castlemartyr
Grid ref	196 235 E; 72 891 N
(6E, 6N)	

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.

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Attachment included	Yes	No
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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.

Type of	Emergency overflow - connects to Primary Discharge Point – pipe to river
Discharge	a Mist
Unique	SW01CMYR
Point Code	
Location	Bridgetown, Castlemartyr
Grid ref	196 235 E; 72 891 N
(6E, 6N)	· · · · · · · · · · · · · · · · · · ·

Type of	Emergency overflow – pipe to river	
Discharge		
Unique	SW02CMYR	
Point Code		
Location	Bridgetown, Castlemartyr	
Grid ref	196 377 E, 72 203 N.	
(6E, 6N)		

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	Νο
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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.

Type of	Connects to Primary Discharge Point – pipe to river		
Discharge			
Unique	SW01CMYR		
Point Code			
Location	Bridgetown, Castlemartyr		
Grid ref	196 235 E; 72 891 N		
(6E, 6N)			

Type of	Pipe to River		
Discharge			
Unique	SW02CMYR		
Point Code	A A OB		
Location	Bridgetown, Castlemartyr		
Grid ref	196 377 E, 72 203 N. دون کال 196 377 E, 72 203 N.		
(6E, 6N)	autonino		
off of received			

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.

Attachment included	Yes	No
	~	

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.

Name:	Cork County Council
Address:	County Hall
	Carrigrohane Road
	Cork
Tel:	021 4276891
Fax:	021 4276321;
e-mail:	

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

has been obtained	✓	is being processed	
is not yet applied for		is not required	

Local Authority Planning File Reference Nº:	Not available*

*Planning Permission was obtained under the 1994 Planning and Developments Regulations under a Part 10.

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.) areas

150.

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

Within the SFADCo Area01	Yes	No
Cont		✓

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.

Name:	Health Services Executive Southern Region
Address:	North Lee Local Health Office
	Floor 2, Abbeycourt House
	George's Quay
	Cork
Tel:	021 4965511
Fax:	
e-mail:	info@hse.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.

Name:	Not applicable
Address:	
Tel:	
Fax:	
e-mail:	

Relevant Authority Notified	Yes	No
		✓

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

Attachment included	W. MOTYes	No
	ase official	✓
	~	

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 ($\leq A3$) 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.

Population Equivalent	2815
Data Compiled (Year)	2008
Method	GeoDirectory
	assessment, Site
	Surveys,
	assessment of
	influent and CSO
	data

The GeoDirectory Data for April 2008 indicates there are 627 houses within the Castlemartyr Agglomeration, of which 14 are identified as 'Vacant', and 32 'Under Construction'. Thus, the number of residential houses occupied in 2008 is 581. Assuming there are c.2.9 persons per household (CSO Data), this equates to a current estimated population of 1685.

Assuming that the non-domestic contribution is 15% of the domestic, the total 2008 Population Equivalent (PE) for Castlemartyr is c. 1938.

Looking to the foreseeable future, Castlemartyr's population is increasing at a high rate, and subsequently the PE required to be treated is increasing. Planning permission has been granted for an estimated PE of 877. Combining the current estimated 1938 PE with the planned 877 PE equates to 2815 PE. Based on a high predicted growth rate of 5% compound \$.a., this PE will not be achieved until 2016.

The current treatment plant has the capacity to treat 2,000 PE, thus the estimated current PE of 1938 is still within the treatment limits. The upgrade works scheduled for the treatment plant will increase capacity to 3,000 PE; this will cater for the foreseeable future PE of 2815, and more.

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 Cork County Council Planning Application Database identified there to be one major development within the Castlemartyr agglomeration boundary providing 200 houses, and other smaller developments contributing 54 units of residence, that have been granted planning permission, but are not yet complete. The 254 additional residential locations, with an average of 3 persons per household, equates to a population equivalent of 762.

Assuming the non-domestic contribution to be 15% of domestic, the non-domestic equates to 115 PE.

The waste water works will not be able to treat this additional load of 877 PE under its current operation without posing an environmental risk, as it is designed for a 2000 PE capacity. However, with the scheduled upgrade works the treatment plant will be able to cater for this additional load, and future loads.

The pending developments identified above, and subsequent occupation is expected to be within the anticipated high 5% p.a. compound growth rate, identified in B9 (i) above.

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 €)
Discharges from agglomeration	25,000
with a population equivalent of	
2,001 to 10,000	

Appropriate Fee Included		Yes	No
		ather	
	2.	MY .	

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.

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Cork County Council has prioritised the upgrading of the Castlemartyr WWTP, adding it to the Water Services Investment Programme for 2007-2009, at an estimated cost of \leq 1.2 million (see attachment B10-1). SLI funding was sought from the DHELG, and approved as per the confirmation letter, attached as B10-02.

ð

White Young Green Ireland Ltd. has been appointed by Cork County Council as Consulting Engineers for the design, procurement and construction stages of the Upgrading of Wastewater Treatment Facilities at Castlemartyr.

In Castlemartyr it is proposed to increase the capacity of the waste water treatment plant from 2,000PE to 3,000PE, install a storm water holding tank at the WWTP site, and pump the treated effluent to a proposed sea outfall at Ballycotton for discharge. This upgrade will remove the treated effluent discharge from the WWTP into the Kiltha River, and reduce the potential for storm overflows into the Kiltha.

The proposed time line for the upgrade works is as follows:June 2009Award Construction ContractNovember 2009Commence ConstructionNovember 2010Complete Works

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
	✓	

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
		- USC.	✓
		Vother	
B.12 Foreshore Act Licences.	es only	20.	
	11Postired		

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 Forsehore 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
		✓

nege

INFRASTRUCTURE & OPERATION SECTION C:

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 • Jate uposesony an 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 inspe 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
	✓	

Description of plant, process and design capacity for the areas of the waste water works where discharges occur

The wastewater in Castlemartyr is collected in a partially combined drainage network and sewered to a terminal pumping station on Main Road, from where the waste water is pumped to the treatment plant at a rate of up to 120m³/hr (8DWF). Flows in excess of $120m^3/hr$ entering the pumping station are overflowed into the adjacent Kiltha River.

Foul sewerage from the new Capella Hotel and Leisure Centre, situated next to the treatment plant is collected in a private system and pumped from a private pumping station into the existing inlet rising main at a new manhole near the treatment plant boundary.

There is no storm water holding tank at the treatment plant. The pumps regulate the inflow to the plant. Flows up to $50m^3/hr$ are pumped forward by the on site pumping station to full treatment. Flows above 50m³/hr are screened then overflowed by gravity to the nearby Kiltha River. The plant has a nominal capacity of 2,000 Population Equivalent (PE), treats flows to a secondary standard (fine bubble aeration), with discharge treatment standards in place for a 25 mg/l BOD₅, 35 mg/l SS and 125 mg/l COD effluent. The treated effluent is discharged to the Kiltha River, which runs approximately 100m to the West of the site.

The following describes the process and equipment in greater detail:

Main Road Pumping Station

oad Pumping Station Pump Sump –Waste water from A sewer pipes enter the pump sump prior • to forward pumping by 2 No. submersible foul pumps (one duty, the other assist) to the treatment plant. Waste water is pumped forward at a rate between $5m^3/h$ and $120m^3/h^2$ via a 250mm diameter rising main. An overflow from the pump sump for storm water / emergency overflow, discharges into the adjacent Kiltha River.

50° 1 10

1 No. Control Panel and Kiosk.

A Process Flow Diagram for the Main Road pumping station is attached as Attachment C1-DRAWING 02.

Activated Sludge Waste Water Treatment Plant

- Inlet works All waste water entering the plant is screened through 1 No. mechanically raked screen (6mm), with compactor, from which the waste material is placed into a skip for disposal. The screened waste water flows by gravity to a pump station. There is a high level storm water / emergency overflow where flows in excess of 50m³/hr are discharged directly to the outlet chamber, and then via the outfall pipeline to the Kiltha River. The storm water / emergency overflows are not recorded.
- Pumping station The screened waste water flows into the pump sump . which houses 2 No. submersible pumps (one duty, one standby). The pumps are called in on level control. The waste water is forward pumped through a flow meter to the Aeration Tank.
- Aeration tank 12m diameter by 2.5m high above ground tank, with fine bubble diffusion, 1 No. mixer, 1 No. air blower and DO probe. After treatment in the aeration tank, the effluent flows by gravity to the clarifier for further treatment.
- Clarifier above-ground 9m diameter by 1.8m high holding tank, with half bridge scraper and 1 No. RAS/SAS pump. The clarified effluent flows over

a V-notch weir under gravity via a 150mm diameter pipe to the outlet chamber.

- Outlet Chamber The treated effluent from the clarifier, and any storm water / emergency overflows from the inlet works are conveyed to the outlet chamber. In the outlet chamber the combined waters are sampled by an automatic sampling unit, prior to discharge through the 200mm diameter outfall pipe into the Kiltha River. A flow meter is located on the outlet pipe, which records total and instant flows.
- Buildings Control Kiosk and mess room/storage building. There is another kiosk on-site which is associated with the Capella Development.
- Access road (unpaved).

Sludge Treatment Process

- The sludge that accumulates at the base of the clarifier flows to a sludge pump, from which it is pumped either to the aeration tank for further treatment (and subsequently is put back into the cycle outlined above), or to the sludge thickening tank.
- Sludge Thickening Tank 1 No. Sludge holding tank 5.5m diameter by 3m high with Picket Fence Thickener, including a submersible pump for dewatering. Sludge liquors are pumped to the inlet pumping station. The sludge is held until the tank is near full, at which time it is collected and transported to Midleton Waste Water Treatment Plant for further dewatering, prior to being taken to Ballincollig WWTP for thermal treatment.

any A Process Flow Diagram for the WWTP is attached as Attachment C1-DRAWING North Conferences 03.

Control Processes

- The pumps at the pump station on Main Road are activated automatically, • once the water reaches specified levels.
- The inlet pump station pumps at the WWTP are activated automatically by level controllers, once the water reaches specified levels.
- The sludge pump at the WWTP is activated manually by the operator when required.
- Air blower for the Aeration Tank is automatically activated once the DO probe records a DO level of 0.5, and ceases when a DO level of 1.5 is achieved.

Laboratory Information

The Castlemartyr WWTP is currently operated by a private operator under a 10 year Operation and Maintenance Contract (Commenced September 2006). The operator is required to collect samples of the waste water received at the inlet works, water within the aeration tank and treated effluent at the outlet, and report on the results monthly. The following table identifies the required monitoring.

Location	Weekly sample required	Monthly sample required	Instantaneous reading – when required
Inlet	COD, BOD ₅ , SS, pH	TP-P	
Outlet	COD, BOD ₅ , SS, pH,	TP-P	Turbidity
Aeration Tank	MLSS, DO		

The operator is also required to collect samples monthly, and send to an independent laboratory for analysis of pH, BOD₅, COD, SS, and TP-P. Cork County Council Waste Water Laboratory, Iniscarra, Co. Cork is the independent laboratory currently used for the samples collected from the Castlemartyr WWTP. This laboratory is INAB accredited and UKAS accredited.

The samples are 'Grab' samples, and are received at the Laboratory on the day of sampling. The test methods are based on Standard Methods for the examination of Water and Waste Water, 21st Edition 2005, APHA, AWWA, WEF.

C.1.1 Storm Water Overflows

There are two storm water overflow locations associated with the Waste Water Works.

(1) Main Road Pump Station storm water overflow, where flows entering the pump station in excess of 120m³/hr (80WF), discharge into the adjacent Kiltha River.

(2) Inlet works at the WWTP storm water overflow. Flows entering the works in excess of 50m³/hr (c.3.3 DWF) are screened (6mm) prior to discharge into the Kiltha River, via the primary discharge point.

Castlemartyr agglomeration has a collection system for urban waste water and it is maintained in accordance with the Urban Waste Water Treatment Directive (91/271/EEC). The pump station on Main Road can pump forward up to 8DWF, and the treatment plant can treat up to 3.3 DWF.

There is no information regarding the frequency of storm water overflows, or the quantities discharged from either the Main Road pump station or the treatment plant.

There are no designated bathing waters, fresh water fish areas or shellfish areas that are affected by the storm water overflows. Nor are there any downstream abstraction points intended for human consumption. Therefore the quality standards or objectives for the aquatic environment considered in the DoEHLG 'Procedures and Criteria in Relation to Storm Water Overflows' (1995) are not applicable to these storm water overflows.

However, the storm water overflow from the waste water treatment plant passes through a 6mm screen prior to discharge. This complies with a National Rivers Authority (UK) standard for consenting storm water overflows into or in close proximity to bathing areas and water contact/recreational use waters. There is no screen on the main road pumping station for storm water overflows.

The DoEHLG 'Procedures and Criteria in Relation to Storm Water Overflows', 1995, provides assessment criteria for existing SWO's. These criteria are discussed below:

1) Determine if the SWOs cause significant visual or aesthetic impact and public complaints.

There are no records of public complaints regarding the SWO's to date.

2) Determine if the SWOs cause deterioration in water quality of the receiving water.

The SWO at the treatment plant is connected to the primary discharge point. Therefore there is no specific data regarding the overflows from the treatment plant. Nor is there any data for the pump station overflow on Main Road.

3) Determine if the SWO gives rise to failure in meeting the requirements of national Regulations on foot of EU Directives (Bathing Waters etc)

There is no information regarding the quality of the storm water overflows for either location, therefore an assessment can not be performed.

4) Determine if the SWO's operate in dry weather.

There are no records to indicate if the storm water overflows operate in dry weather. The pumps in the pump station and in the treatment plant can cater for up to 8DWF and 3.3DWF respectively.

Neither storm water overflow is planned to be decommissioned. The upgrade works include sufficient capacity at the waste water treatment plant for holding storm water; this will reduce the potential for storm water overflows to occur from the treatment plant. In the upgrade, all storm water overflows will be screened to 6mm.

C.1.2 Pumping Stations

Main Road Pump Station

In the Main Road pump station there are two pumps, one duty, the other assist. The pumps activate when waste water can be pumped forward at a rate of $5m^3/h$, and can cater for up to 120 m^3/h (8DWF). In the event of power failure there is an emergency overflow from the pump sump to the adjacent Kiltha River. There is minimal storage capacity in the pump sump, estimated to be 4 hours. There is no information regarding the frequency or duration of activation of emergency discharges to date. The location of emergency discharge is identified on attachment B4-MAP09.

WWTP Inlet Pump Station

The WWTP main pump station has two pumps, one duty the other standby. The pumps can cater for flows up to $50m^3/hr$. There is no emergency overflow from this pump station; however there is an overflow from the inlet works preceding the pump station. In the event of power failure, excess water will fill the pump sump, fill the feeding gravity line from the inlet works, then discharge through the inlet overflow, to the Kiltha River. Once the operator is alerted of a failure, he is able to install a mobile emergency generator to continue operation of the pumps. There is limited storage capacity in the pump sump.

There is no data regarding the frequency or duration of activation of emergency discharges to date. The location of emergency discharge is identified on attachment B4-MAP09.

WWTP Sludge Pump Station

505 The WWTP sludge pump station has two pumps two duty. There is no emergency overflow from this pump station. These pumps are manually activated when the need to move scum build-up arises. In the event of power failure, the pumps will not be activated, unless required by the operator who will connect an emergency generator for their operation.

There is no capacity in the pump sump. There have been no emergency discharges

Outfall Design and Construction C.2

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
	✓	

Main Road Pumping Station Overflow

The pump station pump sump is estimated to have a storage capacity equivalent to 4 hours of storage. Flows in excess of $120m^3/h$ entering the pump sump will fill the pump sump before discharging via the overflow into the adjacent Kiltha River. In the event of pump failure the water will fill the pump sump prior to discharging out the overflow. There is no information regarding the size or invert level of the overflow pipe. Nor are there any technical or construction details of the discharge outfall. The location of the discharge is identified on the attached drawing C2-DRAWING 03

Inlet Storm Water / Emergency Overflow

When flows exceed 50m³/hr entering the inlet works at the waste water treatment plant, the excess water is screened through a 6mm screen, prior to discharge through a 150mm diameter pipe to the outlet chamber. The water then exits the WWTP site via the primary discharge location into the River Kiltha.

Primary Discharge Point

There is one discharge point from the waste water treatment plant site. The outlet from the plant conveys the treated effluent from the plant, as well as storm water and emergency overflows from the inlet (when required), via one 200mm pipe to the outfall, where the effluent is discharged into the Kiltha River. The outfall is an open pipe. Attachment C2-DRAWING 03 identifies the location of the outfall.

There is no information regarding the invert level of the discharge pipe, nor any technical or construction details regarding the outfall.

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 submitted web be via the following based link: 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. Trequired

Discharges to Surface Waters Purf **D.1**

Details of all discharges of waste water from the agglomeration should be supplied the N wing web based link: via http://78.137.160.73/epa_wwd_lfcensing/. Tables D.1(i)(a), (b) & (c), should be completed for the primary discharge point from the applomeration and Tables D.1(ii)(a), (b) & (c) should be completed for **each** secondary discharge point, where relevant. Table $D_{\mathbf{A}}(iii)(a)$ 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
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. 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.

Consent of copyright owner required for any other use.

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/.

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: <u>http://78.137.160.73/epa_wwd_licensing/</u>.

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 on 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.

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
Point Code Provide label ID's assigned in section E of application	Point Type (e.g., Primary, Secondary, Storm Water Overflow)	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

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. 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

150. 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)(I) 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.

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Attachment included	Yes	Νο
Cont	✓	

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 crossreferences 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: <u>http://www.licensing/</u>. 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 The Geological Survey of Ireland classification and vulnerability. 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 21.5 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/EEC¹ 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/EEC²;
 - ¹Council 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)
 - ²Council 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.**

Attachment included	Yes	No
	✓	

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.

.a

Existing Environment

The receiving water body of the Castlemartyr WWW discharge is the Kiltha River, of the Womanagah catchment. All effluent from the treatment plant is discharged via the primary discharge point into the Kiltha River. Storm water / emergency overflows from the pump station on Main Road are also discharged to the Kiltha River. There are no discharges to ground, or any other environmental media.

The Kiltha River drains the northwest area of the Womanagh catchment (approximately 30 km²) including the settlements of Mogeely and Castlemartyr. It flows through a narrow valley for approximately 17km before meeting the Womanagh main channel immediately upstream of Ladysbridge.

Downstream of the Kiltha's confluence with the Womanagh River, the Dower and Dissour Rivers enter the Womanagh River, prior to discharge into Youghal Bay. The Womanagh River becomes tidal at Finisk Bridge, immediately downstream of the Womanagh-Dissour confluence and 8km upstream of the bay. The lower stretches of the Womanagh are meandering and characterised by a soft substrate due to silt deposition. The river becomes estuarine near the shoreline.

Flow data of waters upstream of the discharge emission point, incl. DWF, 95%ile and median flows are shown in the table below. There are currently no monitoring stations located downstream of Castlemant in the Kiltha, nor are there any stations on the Womanagh.

	Upstream	Downstream:
	CastlemartyrBridge	Immediately downstream
	196196 E 72804 N	of WWTP outfall
	(200m upstream of the	
	discharge location)	
DWF (l/s)	8.5 ¹	13
95%ile (l/s)	33 ¹	37
Median (l/s)	15 ^{eft} 224 ²	229

¹ EPA hydrometric data registe

² Median Flows have been estimated based on 95% ile and average flows

Flows at the discharge point (200m downstream of Castlemartyr Bridge) provide a dilution ratio of 1:7.9 for the existing 2000 PE plant.

The water quality at Castlemartyr Bridge is relatively poor; the river is given an EPA Biological Quality Rating / Q value of 3-4 (slightly polluted). This rating has been applied to this part of the river for the past 10/15 years.

In the Womanagh River 3.47 km downstream of the discharge, south of Ballyhonock Lough, the most recent Q value as recorded by the EPA is 3 (moderately polluted). The sources affecting water quality at this location has been recorded as including discharges from both Castlemartyr and Ladysbridge treatment works, agricultural runoff, discharge from a concrete manufacturer and naturally occurring limestone springs.

In 2006 sampling undertaken for the Womanagh Catchment Assessment Report recorded the following:

Location	EPA Q level
20m upstream of Castlemartyr village	4-5
45m downstream of discharge from Castlemartyr WWTP	4
10m upstream of all discharges from Ladysbridge village	4-5

These results suggest the effluent from the Castlemartyr WWW has a localised negative effect on the water quality.

Cork County Council has ongoing monitoring of the surface waters upstream and downstream of the discharge point, the recent results from this monitoring are shown in the attached Tables F1 – 01 (i) (a) and (b) for upstream results, and F1-02 (i) (a) and (b) for downstream results. The sampling locations upstream (aSW01u) and downstream (aSW01d), and discharge locations (SW01 and SW02) are shown on Figure B2-MAP06.

The following table compares the average of the upstream results for sampling at Castlemartyr Bridge (Station 1000) with regulatory water quality standards:

Parameter	Unit	2002 - 2005	2007- 2008	Limit
рН	-	-	7.74 Pet	6-9 ⁽¹⁾
BOD	mg/l	-	ontoi1.53	3 ⁽²⁾
SS	mg/l	- Purpeni	6.45	25 ⁽²⁾
Nitrate	mg/l N	UNSPECTION DE		11.3 ⁽³⁾
Nitrite	mg/l N 🌾	N ¹⁰ .014		0.05 ⁽¹⁾
Orthophosphate*	mg/l R of	0.135	0.05	0.03 ⁽⁴⁾
Ammonium	mg⊄PNH₄	0.046		0.3
Total Nitrogen	mg/l N		8.21	-

*Median Value

⁽¹⁾ Salmonid Waters Regulations

⁽²⁾ Fresh Water Fish Directive – Salmonid Fish

⁽³⁾ Drinking Water Directive and Surface Water Directive (50 mg/l NO₃ \approx 11.3 mg/l N)

⁽⁴⁾ Phosphorous Regulations (Q4)

The results for pH, BOD and SS are all within the regulation values. The median Orthophosphate level in the Kiltha is shown as elevated during the period Jan 2007 – April 2008. The level of 0.05 mg/l P is 1.7 times the limit set for Satisfactory Water Quality under the 1998 Phosphorous Regulations.

As shown, orthophosphate levels have historically been recorded as high in the Kiltha. During 2002-2005, median levels of Orthophosphate were recorded as 0.135 mg/l P respectively, and the EPA documents the Q value as between 3 and4 for the past c.15 years. Although recorded as high, the median level has decreased.

There is little recent data regarding Nitrates in the Kiltha. However, data collected between 2002 and 2005 indicate elevated Nitrate levels, with a mean nitrate concentration of 6.2 mg/l N. This concentration is within the limit set for Clean Water Quality in the Drinking Water Regulations 2000 and the Surface Water Directive (50mg/l NO₃ \approx 11.3 mg/l N). However 11.3mg/l N is a relatively high concentration limit. A desirable limit is considered to be 5.6 mg/l N (50% of the Drinking Water Regulations or Surface Water Directive limit), the upstream water quality is in excess of the desirable limit.

Assimilative capacity of the Kiltha River at the discharge location is shown in the following table:

Parameter	Unit	Background	Discharge	Required	Assimilative
		Level	Level	Combined	Capacity
			Required	Level	
BOD ₅	mg/l O ₂	1.53^{1}	25	3	0
SS	mg/l	6.45 ¹	35	25	60%
O-PO ₄ -P	mg/l P	0.05 ²	-	0.03	0
TN	mg/l N	8.21^{1}	40 ³	11.3	0
¹ Average of results for Jan 2007 - April 2008 ² Median of Orthophosphate. ³ Assumed nitrogen concentration.					
Lochnically th	n nutriont o	comulativa cana	CMU/ AT THA KIITH	2 Divor st (30	tiomartvr

Technically, the nutrient assimilative capacity of the Kiltha River at Castlemartyr, upstream of the treatment plant, is currently zero.

Compared to the fresh water fish directive for Salmonid fish maximum level of concentration, the BOD assimilative capacity is also calculated as zero. However, if compared with the Salmonid water regulations and surface water regulations $(BOD_5 < 5mg/l)$, the assimilative capacity for BOD in the river is c. 12%.

There is no data regarding sediment quality in the Kiltha.

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.

Dangerous Substances Directive

There is little industrial activity within Castlemartyr, thus it is not expected that the waste water would have any more than a minor contribution of dangerous substances into the environment.

In regard to ammonia, nitrate and phosphorous, there are no nutrient removal facilities at the WWTP. The quantity of nitrate and phosphorous concentrations being released within the effluent from the plant are currently having a negative impact on the environment, due to there being no assimilative capacity within the Kiltha waters.

During the period July 2007 – October 2007 samples from the outlet were tested for the List 1 substance cadmium, and list 2 substances zinc, copper, nickel, chromium, lead and barium. Concentrations of these substances were undetected above 0.02 mg/l, with the exception of one sample in July, which recorded 0.027mg/l for Zinc.

The dangerous substances directive applies to the WWTP, however there are no measures in place to remove any dangerous substances from the waste water.

There are no measures taken at the Castlemartyr WWTP to ensure discharges will not have a significant effect on faecal coliform, salmonella or protozoan numbers in the receiving water environment. However, there are no areas designated for the abstraction of water for human consumption that are affected by the discharge from the Castlemartyr WWTP to the Kiltha River. Consequently the provisions of the Surface Water Directive (Council Directive 75/440/EEC, and SI No. 294 of 1989) do not apply.

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 protected / designated sites/areas

There are no specific designations within the Kiltha or subsequent receiving waters that will be affected by the discharge from the WWTP.

Freshwater Fish and Salmonid Directive

Neither the Kiltha nor Womanagh have been designated under the Regulations. Thus, Council Directive 78/659/EEC on the quality of fresh waters needing protection in order to support fish life, and the subsequent Quality of Salmonid Waters Regulations 1988 (SI No. 293 of 1988) do not apply to the Kiltha. However, Brook lamprey (*Lampetre planeri*) were noted as being detected at biological sampling sites upstream of Castlemartyr in the Womanagh Catchment Assessment Report (Dixon Brosnan, 2006). And it must be noted that the Womanagh River is an important fishery for sea trout (*Salmo trutta*) and brown trout (*S. trutta*). It has been suggested that smelt (*Osmerus eperlanus*) and/or shad (*Alosa sp.*) may be present in the catchment, although no data are available.

EU Shellfish Waters Directive

EU Shellfish Waters Directive (79/923/EEC) and EU Directive on Health Conditions and the Placing on the Market of Live Bivalve Molluscs (91/67/EEC) and associated amendments do not apply, as there are currently no shellfish designations within the Kiltha or Womanagh Rivers.

It must be noted that there is a draft Shellfish Designation in Ballymacoda Bay where the Womanagh River discharges to the sea. The effluent from the plant should not affect the designated area, due to the distance between the two. Attachment F1-MAP12 Shows the location of the discharge point in relation to the draft designation. When officially designated, the site has six years to conform to the quality required of shellfish waters (in accordance with Directive 2006/113/EC). Within this time frame it is expected that the upgrade works for the plant will have been completed, and the effluent from the treatment plant will not be entering the Kiltha River, and subsequently Ballymacoda Bay.

Pursuant to Council Directive 91/492/EEC, the Minister for the Marine and Natural Resources issued a list of areas, including Youghal Bay, from which molluscs may be taken. There are 2 known mussel farms of Ballymacoda around Capel Island.

Due to the respective distances of 17.5 km and 20.2 km between the treatment plant discharge location and Youghal Bay / Capel Island, the effluent should not affect the designated areas.

Birds and Habitats Directives

There are no designations for SACs or SPAs within 2km of the Castlemartyr WWTP site. Two pNHAs designations were identified, including the Clasharinka Pond (pNHA 1183) and the Loughs Aderry & Ballybutler (pNHA 1076), however neither of these designations will be affected by the Kiltha River waters. Therefore Council Directives 92/43/EEC (of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) and 79/409/EEC (of 2 April 1979 on the conservation of wild birds) do not apply.

Bathing Water Directive

There are no designated inland bathing areas in the Kiltha or Womanagh Rivers, nor any designated beaches on the Womanagh Estuary. Consequently Council Directive 76/160/EEC, concerning the quality of bathing water, and the follow up Quality of Bathing Waters Regulations 1992 (SI No. 155 of 1992) do not directly apply.

There are blue flag beaches at Youghal and Garryvoe, which are near the Womanagh Estuary. However, due to the distance between the Castlemartyr WWTP discharge location and the beaches (c.20.5 km and c.28 km, respectively), the discharge is not expected to influence the waters at either of these beaches.

Measures undertaken to ensure discharges from the WWW will not have a significant effect on Environment etc

Waste water is treated to a secondary level, to comply with the Urban WW Treatment Standards. The treatment plant discharge is monitored weekly for BOD₅, COD and SS so as to confirm compliance with applicable regulations. TP-P and pH are also monitored weekly.

There has been no modelling undertaken of discharges from the agglomeration to date.

Upgrade works are planned at the WWTP, to increase the capacity of the plant to 3,000PE, to install a storm water holding tank and to pump the treated effluent to Ballycotton for discharge via a sea outfall. This will remove the potential for the WWTP to affect the Kiltha and subsequent bodies of water.

Nature of Final Emission to Receiving Waters

The WWTP is required to treat waste water, at a minimum, to a 25 mg/l BOD, 35 mg/l SS and 125 mg/l COD discharge quality, in accordance with the Urban Waste Water Treatment Standards.

The final discharge from the WWTP includes any storm water or emergency overflows. This discharge is monitored by the operator weekly, and analysed once a month by an independent laboratory. The average results for the period January 2007 – April 2008 is shown in the table below, compared with the WWTP discharge standards.

Parameter	Unit	Discharge Regulations	Combined Outlet Average Results
рН	-	-	7.29
BOD ₅	mg/l O ₂	25	12.64
Total SS	mg/l	35	39.94
COD		125	68.88
Orthophosphate*	mg/l P	-	2.1

*Median Value

The pH, BOD, COD and Orthophosphate concentrations are within the discharge regulations applied to the Castlemartyr WWTP. The SS regulation value was not achieved for this period, however the raw data indicates two readings, one of 300 mg/l, the other 102 mg/l where storm water overflows may have been the cause of the increased concentrations.

The Waste Water Treatment Plant capacity is 2000 PE, which results in an estimated discharge of 360 m³/day. This discharge volume is 49% of the river DWF.

WWDL Application Form - Castlemartyr

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
Abstraction Code	Agglomeration served	Abstraction Volume in m³/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. 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.

.orme Not Applicable

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.

0

other

Attachment included	SPecto Milel	Yes	No
	Forminight		✓
	of con		

Cork County Council has prioritised the upgrading of the Castlemartyr WWTP, adding it to the Water Services Investment Programme for 2007-2009. The SLI funding confirmation letter from DEHLG and the Services Investment Programme Sheet is in attachment B10.

The upgrade works include increasing the capacity of the waste water treatment plant from 2,000 PE to 3,000 PE, including storage for storm water overflows at the WWTP site, and pumping of the treated effluent to a new sea outfall at Ballycotton for discharge. This would remove the treated effluent currently being discharged into the River Kiltha, and reduce the potential for emergency overflows into the river. In addition all emergency and storm overflows will be screened through 6mm screens.

The proposed time line for the upgrade works is as follows:

June 2009	Award Construction Contract
November 2009	Commence Construction
November 2010	Complete Works

The Dangerous Substances Directive (2006/11/EC)

In the current operation there are no nutrient removal facilities at the plant, and none are planned within the upgrade works. In regard to other dangerous substances, there have been none detected at this stage, and as there is little industrial activity within Castlemartyr, it is expected that very minor quantities of the contaminants would be released from the WWTP.

Therefore the operation is compliant with the directive in regard to contaminants other than nutrients.

The Water Framework Directive (2000/60/EC)

- Current situation not compliant, as there are no warning mechanisms for plant malfunctions, or any measures taken to reduce the potential of pollution from the site. The current operations and maintenance contractor is required to visit the site at least twice a week, however typically visits the site at least once a day. If a problem is identified by the contractor whilst on-site, the fault is repaired.
- The upgrades will include the installation of a SCADA system. This will aid in complying with the directive by alarming the contractor instantly of any malfunction at the plant, enabling him to mitigate or remove the potential for pollution.

Birds Directive (79/409/EEC) is not applicable in the current operation, due to there being no designated areas within 2km of the WWTP.

Groundwater Directives (80/68/EEC & 2006/118/EC) are not applicable as there are no discharges to ground in the current operation, and will be none with the upgrade works.

Drinking Water Directive (80/778/EEC) does not apply, as there are no water abstraction locations intended for human consumption that will be affected by the discharges from the WWTP, either in the current operation or after the upgrade works are complete.

Urban Waste Water Treatment Directive (91/271/EEC)

The Castlemartyr WWTP is currently operated by a private contractor under a 10 year operation and maintenance contract, which commenced in 2006. The Operator is contractually obliged to comply with the Urban Waste Water Treatment Directive (91/271/EEC), and monitors the quality of influent into and effluent leaving the plant, as well as flows through the plant to ensure compliance.

However, currently the outlet flow monitored includes both the treated effluent from the plant **and** any screened storm water overflows or emergency overflows that occur at the inlet works of the plant. The Urban WWT Directive specifies the treated effluent is to be monitored, so as to monitor the performance of the plant. Therefore, the monitoring is technically not in compliance with the Directive. The upgrade works will include for monitoring of both the treated effluent and overflows separately, so as to have a compliant methodology. In regard to the effluent quality leaving the plant, in spite of monitoring the combined flow, the results show the effluent is in compliance with the Directive for BOD and COD (as assessed in Section F). However, the SS value is not in compliance. From the raw data it appears that on two occasions the SS concentration is 300mg/l and 102mg/l, it is expected that these concentrations were recorded during a storm water or emergency overflow.

Habitats Directive (92/43/EEC) is not applicable in the current situation or after the upgrade works, as there are no designated areas downstream of the plant discharge within 2km of the WWTP discharge location.

Environmental Liabilities Directive (2004/35/EC)

As part of the operator's contract, failure to meet specified final effluent quality standards stipulated in the second schedule of The Urban Waste Water Treatment Regulations (S.I. 254 of 2001) (as per Urban Waste Water Treatment Directive (91/271/EEC)) results in financial penalties due to non-compliance. The penalties vary depending on the severity of the pollution caused. This polluter pays principle means that the current operation is compliant with the directive. The operation and maintenance contract will continue to apply after the upgrade works are complete, thus the operation will continually comply with the Environmental Liabilities Directive.

Bathing Waters Directive (76/160/EEC) is not applicable, as there are no designated bathing waters in the Kiltha River, The upgrade works will remove the treated effluent from the river, to Ballycotton, where the effluent will be managed so as not to affect the designated bathing water at Garryvoe.

The Shellfish Directive (79/923/EEC) does not apply in the current situation. If the draft designation in Ballymacoda Bay is finalised before the upgrade works are complete, the operation may not be in compliance with this directive. However, the upgrade works will remove the treated effluent from the Kiltha River, and reduce overflows into the river, thus the treatment plant will comply with this directive.

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.

Attachment included	Yes	No
		✓

There are currently no phosphorous removing devices at the plant.

Calculations have shown the Assimilative Capacity for Phosphorous in the River Kiltha, where the discharge from the WWTP occurs is 0.

The Phosphorous Regulations Implementation (PRI) Report No. 4, using results from 2005, and the recently updated PRI table 1.1 using results from 2007 show the quality rating in the Kiltha at the Bridge in Castlemartyr (Station 1000), slightly upstream of the WWTP outfall as 3-4. This relates to a 2007 MRP Value of 60 ug/l P. The most recent monitoring results for Jan 2007 – April 2008 indicate the current Orthophosphate concentration to be 50 ug/l P. The standard to be achieved by 2013 is a quality rating of 30ug/l P.

Station 1300, South of Bally onock Lake, approximately 3.4 km downstream of Castlemartyr WWTP has a quality rating of 3. The current MRP Value is 38 ug/l P. The standard to be achieved by 2013 is a quality rating of Q4, with a MRP value of 30 ug/l P.

The Phosphorous Regulation Implementation Plan notes the identifiable sources of pollution for Station 1300 as the Castlemartyr and Ladysbridge WWTPs; Agricultural Pollution; A Concrete Manufacturer and natural Limestone spring effects from the Dower.

The Upgrade Works at the Castlemartyr WWTP include increasing the capacity of the treatment plant and pumping the treated effluent to a proposed sea outfall at Ballycotton, thus removing treated effluent discharges into the River Kiltha. The works also include increased storm water overflow storage, therefore reducing potential overflows to the river. The upgrade works will therefore reduce phosphorous concentrations entering the river from the WWTP, and thus aid in achieving the standard for Station 1300.

It is also proposed to discontinue the treated effluent discharge from Ladysbridge WWTP and to discharge the treated effluent to an outfall at Ballycotton. The existing WWTP at Mogeely is to be replaced with a new WWTP which will increase the treatment capacity from 200PE to 1200PE. The new WWTP will discharge effluent with a limit of 1 mg/l P for Total Phosphorous. The expected commissioning date for the new WWTP is October 2008

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.

Attachment included	Yes	No
		✓

The upgrade works include pumping treated effluent to a proposed sea outfall at Ballycotton. There is no expected impact on the receiving water quality at Ballycotton.

Discharges from the Waste Water Works will not affect groundwater.

There are no Special Areas of Conservation, Special Protection Areas, Natural Heritage Areas or European Sites which discharges from the WWTP will affect. Nor are there any designated bathing waters, areas designated for the protection of shellfish or fresh water fish, or any water abstraction locations intended for human consumption that will be affected by the WWTP discharges.

G.4 Storm Water Oversiow

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.

Attachment included	Yes	No
		✓

There are no storm water overflows associated with the waste water works, other than those discharging from the primary and secondary discharge points. The upgrade works will include for sufficient storm water storage at the treatment plant. All storm water overflows from the waste water works will be screened to 6mm.

SECTION H: DECLARATION

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)

0.01.08 Date :

Print signature name: _____

Patricia Power

Position in organisation: Director of Services

EPA Export 26-07-2013:02:26:12

SECTION I: JOINT DECLARATION

Joint Declaration Note1

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	NSC.
Signed by :(on behalf of the organisation)	Date :
Print signature name:	
Position in organisation:	
Co-Applicants	
(on behalf of the organisation)	Date :
Print signature name:	
Position in organisation:	
Signed by : (on behalf of the organisation)	Date :
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.

WWD Application Form Version 6/08



ANNEX – Standard Forms