



**CORK COUNTY COUNCIL**  
**WESTERN DIVISION**  
**WATER SERVICES**

Re: Waste Water Discharge Licence Application for the Agglomeration of Rosscarbery-Owenahincha

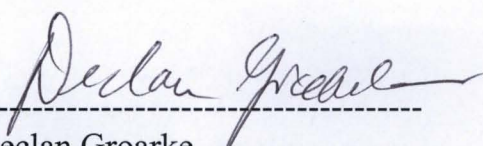
Dear Sir / Madam,

Please find enclosed Cork County Council's Waste Water Discharge Licence Application for the agglomeration of Rosscarbery-Owenahincha

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 (OCR'd format)
- 2 Nr. CD-ROM with GIS Data, Tabular Data

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

  
-----  
Declan Groarke  
Senior Executive Engineer



**CORK COUNTY COUNCIL**  
**WESTERN DIVISION**  
**WATER SERVICES**

**APPLICATION FOR WASTE**  
**WATER DISCHARGE LICENCE**

**Rosscarbery Owenahincha**  
**Agglomeration**

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This is a draft document and is subject to revision.



# Waste Water Discharge Licence Application Form

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

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

**Tracking Amendments to Draft Application Form**

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



## Waste Water Discharge Authorisation Application Form

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

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

**CONTENTS**

	<b>Page</b>
<b>TRACKING AMENDMENTS TO DRAFT APPLICATION FORM</b>	<b>3</b>
<b>ABOUT THIS APPLICATION FORM</b>	<b>6</b>
<b>PROCEDURES</b>	<b>7</b>
<b>SECTION A: NON-TECHNICAL SUMMARY</b>	<b>9</b>
<b>SECTION B: GENERAL</b>	<b>13</b>
<b>SECTION C: INFRASTRUCTURE &amp; OPERATION</b>	<b>26</b>
<b>SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT</b>	<b>32</b>
<b>SECTION E: MONITORING</b>	<b>34</b>
<b>SECTION F: EXISTING ENVIRONMENT &amp; IMPACT OF THE DISCHARGE(S)</b>	<b>36</b>
<b>SECTION G: PROGRAMMES OF IMPROVEMENTS</b>	<b>45</b>
<b>SECTION H: DECLARATION</b>	<b>49</b>
<b>SECTION I: JOINT DECLARATION</b>	<b>50</b>
<b>ANNEX 1: TABLES/ATTACHMENTS</b>	
<b>ANNEX 2: CHECKLIST</b>	



## 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](http://www.epa.ie).

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

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

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

## 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 (within the two weeks prior to date of application) in a newspaper circulating in the area, and erect at the point nearest to the waste water treatment plant concerned or, if no such plant exists, at a location nearest the primary discharge point, a notice of intention to apply. An applicant, not being the local authority in whose functional area the relevant waste water discharge, or discharges, to which the relevant application relates, takes place or is to take place, must also notify the relevant Local Authority, in writing, of their intention to apply.

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

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

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

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

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

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



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

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

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

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

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## SECTION A: NON-TECHNICAL SUMMARY

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 NA.1**

### Description of the Wastewater Works and the Activities Carried out therein.

#### Rosscarbery and Owenahincha Agglomerations

The villages of Rosscarbery and Owenahincha are on the south coast of Ireland. Rosscarbery is on the western side of an inlet of the sea off Rosscarbery bay, approximately 11km and 53km south west of Clonakilty and Cork City respectively. Owenahincha is a seaside resort approximately 2 kilometres east of Rosscarbery. The population of both villages' increases significantly in the tourist season as both are popular holiday resorts.

#### The Collection System

The effluent from the Rosscarbery and Owenahincha agglomerations is collected in a combined sewer network consisting of both gravity and pumped systems. In the Rosscarbery Agglomeration the effluent from the west and south-west of the town centre flow by gravity to pumping station one (P1), whereas the effluent from the north and north east of the town centre flow by gravity to pumping station two (P2). From the pumping stations P1 and P2, the effluent is pumped to the western edge of the causeway. From here the effluent flows by gravity to the main pumping station (P4).

The effluent from the eastern region of the Rosscarbery agglomeration is pumped from pumping station P3 to the highpoint of the pipeline (approximately 360m downstream). From this highpoint the effluent flows by gravity to P4. Furthermore all effluent from the south-east of the Rosscarbery Agglomeration flows to gravity to P4. At P4 all effluent from the Rosscarbery Agglomeration is pumped to the septic tank in Creggane.

In Owenahincha, the waste water flows by gravity to the pumping station five (P5) where it is pumped to the Creggane tank. P5 consists of two sumps, foul and storm sump and two overflows. The effluent in the foul sump is either pumped directly to the septic tank at Creggane or Overflows to the storm sump where two pumps transport it to the discharge point SW01 Ross Owen via a separate storm rising main. The overflow from the storm sumps spills to the Owenahincha stream.

All the pumping stations have overflow channels to the different discharge points. Table A.1.1 below summarizes the pumping capacities of the different pumps and their respective discharge points. The location of the discharges points and pumping stations are showing in Attachment B.4.

**TABLE A.1.1: Details of Pumping Stations.**

<b>Pumping Station</b>	<b>Pumping capacity (l/s)</b>	<b>Emergency and Stormwater Overflow</b>
Pump Station 1	24	Emergency and stormwater overflow: SW02 Ross Owen.
Pump Station 2	40	Emergency and stormwater overflow: SW03 Ross Owen.
Pump Station 3	8.5	Emergency and stormwater overflow: SW04 Ross Owen.
Pump Station 4	22.7	Emergency and stormwater overflow: SW05 Ross Owen.
Pump Station 5 (foul)	17	Emergency and stormwater overflow: SW01 Ross Owen. via storm pump.
Pump Station 5 (Storm)	41	Emergency and stormwater overflow: SW06 Ross Owen.

### **Wastewater Treatment Plant**

The treatment plant is located in Creggane, in front of the Rosscarbery estuary entry. The treatment process is a primary sedimentation system consisting of two identical septic tanks.

The design load on the septic tanks is:

- Capacity = 5,239 peoples
- Current load = 4,051 pe
- Dry Weather Flow = 696 m<sup>3</sup>/day
- BOD load = 243 kg/day

It is proposed that a new treatment plant will be built to upgrade the capacity and the quality of the treatment. The program of proposed work is detailed in the section B.10

### **The Sources of Emissions from the Wastewater Works**

The plant is discharging through an open pipe to the sea. The outfall pipe terminates at low tide.

All the pumping stations have emergency overflows and hence represent sources of emissions. Since the discharge may occur due to pump failure or in the case of an extreme rainfall event, most of these discharges are considered to be both secondary and stormwater overflow. The overflows are discharging into the coastal water (SW01 Ross Owen, SW05 Ross Owen), transitional water (SW03 Ross Owen, SW04 Ross Owen) or in streams (SW02 Ross Owen, SW06 Ross Owen).

### **The nature and quantities of foreseeable emissions from the wastewater works into the receiving aqueous environment as well as identification of significant effects of the emissions on the environment**

It is assumed that the treatment in the septic tank would result in a reduction of up to 30% BOD. The sampled data from the outfall pipe have been included in Attachment F1 and shows an average of 149mg/l of BOD.

It is estimated that the quantity of peak emissions from WWTP will be equal to 3 DWF (2,094m<sup>3</sup>/day). At present the storm water overflows and secondary discharges are not quantified. The treated effluent from the septic tank and storm overflows from the pumping stations are discharged to or in the vicinity to the following areas:

- Bathing areas: Owenahincha Beach and Warren Beach.
- Rosscarbery Estuary, candidate National Heritage Area (pNHA).
- The Rosscarbery Harbour (Rosscarbery Lagoon) and the Owenahincha stream are considered to be "possibly at risk of not achieving good status" in the water framework directive.

### **Bathing Areas**

The Bathing Water Regulations give limits on the faecal and total coliform counts in the water. As these limits have never been exceeded and the blue flag beach status has been conserved it is assumed that the impact of the discharges to the bathing areas is negligible.

### **Candidate Special Area of Conservation (pSAC)**

The Kilkeran Lake & Castlefreak dunes are approximately 3,500m away from the primary discharge point. Due to the nature of emissions it can be assumed that there is no negative impact on the Castlefreak dunes. Furthermore as the Kilkeran Lake is 3,500m away from the primary discharge point the level of dilution and dispersion renders the discharge insignificant. Further details of the dilution calculation are given in Section F1.

## Rosscarbery Bay (pNHA)

Due to the high dilution and mixing that takes place in the Rosscarbery Bay the impact of the emissions on the pNHA is negligible. The results from a float study carried during the Owenahincha Preliminary Report further clarify that impact is negligible due to the time taken for the floats to reach the pNHA. Please refer to Section F for further details.

Therefore it can be concluded that there are no significant effects from the primary discharge on the environment due to the distance from sensitive area, high dilution and nature of treatment provided, as confirmed by the recorded data.

The impact of the secondary discharges on the Owenahincha stream is negligible as the preliminary results from the WinDes model indicates that there is no storm overflow for a 1 year storm at this pump station. It should be noted that the preliminary results show that 2 pump stations will spill for a 1 year storm. As this discharge is a diluted stormwater discharge and there is no other data available to quantify the impact of the overflows, it is not considered to be significant.

Further information is given in section F.1.

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

A proposed programme of works on the wastewater treatment plant is detailed in Section B.10. A further program will be proposed for the storm water overflow system following completion of modelling and assessment of the network.

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

The complete process will be upgraded in the near future with the construction of a new WWTP. The treatment capacity, the discharge quality and control systems will be improved to ensure that no significant pollution is caused.

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

The emissions from the WWTP can be monitored through the sampling point SW01 Ross/Owen (see Map Ross/Owen B2 - 01 for location).

In the upgraded WWTP, monitoring and sampling of the emissions will be provided in inlet and outlet works (see Map Ross/Owen B10 – 01). The sampling will consist of a composite sample and all emissions will be measured and can be sampled before discharged.

A complete description of the program of work is given in section B.10.

**SECTION B: GENERAL**

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

**B.1 Agglomeration Details**

**Name of Agglomeration:** Rosscarbery Owenahincha

**Applicant's Details**

**Name and Address for Correspondence**

Only application documentation submitted by the applicant and by the nominated person will be deemed to have come from the applicant. Provide a drawing detailing the agglomeration to which the licence application relates. It should have the boundary of the agglomeration to which the licence application relates clearly marked in red ink.

<b>Name*:</b>	Cork County Council
<b>Address:</b>	Water Services ( Western Division) Courthouse, Skibbereen, Co. Cork
<b>Tel:</b>	(028)21299
<b>Fax:</b>	(028)21995
<b>e-mail:</b>	declan.groarke@corkcoco.ie

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

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

<b>Name*:</b>	Declan Groarke
<b>Address:</b>	Cork County Council. Courthouse, Skibbereen, Co. Cork
<b>Tel:</b>	(028)21299
<b>Fax:</b>	(028)21995
<b>e-mail:</b>	declan.groarke@corkcoco.ie

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

**Co-Applicant's Details**

<b>Name*:</b>	N/A
<b>Address:</b>	
<b>Tel:</b>	
<b>Fax:</b>	
<b>e-mail:</b>	

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

**Design, Build & Operate Contractor Details**

<b>Name*:</b>	N/A
<b>Address:</b>	
<b>Tel:</b>	
<b>Fax:</b>	
<b>e-mail:</b>	

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

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

Attachment included	Yes	No
	✓	

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

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

<b>Name*:</b>	John Conroy or James Dwyer
<b>Address:</b>	Creggane
<b>Grid ref (6E, 6N)</b>	130186 E, 34057 N
<b>Level of Treatment</b>	Primary
<b>Primary Telephone:</b>	023-33347 or 028-21299
<b>Fax:</b>	023-33147 or 028-23836
<b>e-mail:</b>	<a href="mailto:John.conroy@corkcoco.ie">John.conroy@corkcoco.ie</a> or <a href="mailto:james.dwyer@corkcoco.ie">james.dwyer@corkcoco.ie</a>

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

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

Attachment included	Yes	No
	✓	

### B.3 Location of Primary Discharge Point

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

<b>Type of Discharge</b>	Open pipe.
<b>Unique Point Code</b>	SW01 Ross/Owen
<b>Location</b>	Rosscarbery Bay
<b>Grid ref (6E, 6N)</b>	130186E, 035039N

**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.

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

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

Give the location of **all** secondary discharge points associated with the waste water works. Please refer to Guidance Note 1 for information on Secondary discharge points.

<b>Type of Discharge</b>	Outfall pipe
<b>Unique Point Code</b>	SW02 Ross/Owen
<b>Location</b>	Celtic Ross, Rosscarbery
<b>Grid ref (6E, 6N)</b>	128531E, 036287N

<b>Type of Discharge</b>	Outfall pipe
<b>Unique Point Code</b>	SW03 Ross/Owen
<b>Location</b>	Church Road Rosscarbery
<b>Grid ref (6E, 6N)</b>	128819E, 036591N

<b>Type of Discharge</b>	Outfall pipe
<b>Unique Point Code</b>	SW04 Ross/Owen
<b>Location</b>	Mill Road, Burgutia, Rosscarbery
<b>Grid ref (6E, 6N)</b>	129103E, 036897N

<b>Type of Discharge</b>	Outfall pipe
<b>Unique Point Code</b>	SW05 Ross/Owen
<b>Location</b>	Warren Road, Burgutia, Rosscarbery
<b>Grid ref (6E, 6N)</b>	129297E, 036182N



<b>Type of Discharge</b>	Outfall pipe with non return flap valve.
<b>Unique Point Code</b>	SW06 Ross/Owen
<b>Location</b>	Owenahincha Bridge
<b>Grid ref (6E, 6N)</b>	130782E, 035452N

**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.

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

### 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.

The discharge points SW02 Ross/Owen, SW03 Ross/Owen, SW04 Ross/Owen, SW05 Ross/Owen and SW06 Ross/Owen are defined secondary discharge points in Section B.4. It is also assumed that they may provide for storm water overflows. The preliminary assessment from the WinDes model indicated that 4 of the 6 overflow for a 1 year storm (SW01 Ross/Owen, SW02 Ross/Owen, SW04 Ross/Owen and SW05 Ross/Owen).

<b>Type of Discharge</b>	Open pipe.
<b>Unique Point Code</b>	SW01 Ross/Owen
<b>Location</b>	Rosscarbery Bay
<b>Grid ref (6E, 6N)</b>	130186E, 035039N

<b>Type of Discharge</b>	Outfall pipe
<b>Unique Point Code</b>	SW02 Ross/Owen
<b>Location</b>	Celtic Ross, Rosscarbery
<b>Grid ref (6E, 6N)</b>	128531E, 036287N

<b>Type of Discharge</b>	Outfall pipe
<b>Unique Point Code</b>	SW03 Ross/Owen
<b>Location</b>	Church Road Rosscarbery
<b>Grid ref (6E, 6N)</b>	128819E, 036591N

<b>Type of Discharge</b>	Outfall pipe
<b>Unique Point Code</b>	SW04 Ross/Owen
<b>Location</b>	Mill Road, Burgutioa, Rosscarbery
<b>Grid ref (6E, 6N)</b>	129103E, 036897N

<b>Type of Discharge</b>	Outfall pipe
<b>Unique Point Code</b>	SW05 Ross/Owen
<b>Location</b>	Warren Road, Burgutia, Rosscarbery
<b>Grid ref (6E, 6N)</b>	129297E, 036182N

<b>Type of Discharge</b>	Outfall pipe with non return flap valve.
<b>Unique Point Code</b>	SW06 Ross/Owen
<b>Location</b>	Owenahincha Bridge
<b>Grid ref (6E, 6N)</b>	130782E, 035452N

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

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

### B.6 Planning Authority

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

<b>Name:</b>	Cork County Council-Planning Department,
<b>Address:</b>	County Hall, Carrigrohane Road, Cork.
<b>Tel:</b>	(021) 4276891
<b>Fax:</b>	(021) 4867007
<b>e-mail:</b>	planninginfo@corkcoco.ie

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

<i>has been obtained</i>		<i>is being processed</i>	
<i>is not yet applied for</i>	✓	<i>is not required</i>	

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

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

**B.7 Other Authorities**

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

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

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

<b>Within the SFADCo Area</b>	<b>Yes</b>	<b>No</b>
		√

B.7 (ii) Health Services Executive Region

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

<b>Name:</b>	Health Service Executive
<b>Address:</b>	Area Headquarters Hospital Grounds Skibbereen
<b>Tel:</b>	(028) 40400
<b>Fax:</b>	(028) 21006
<b>e-mail:</b>	-

B.7 (iii) Other Relevant Water Services Authorities

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

<b>Name:</b>	N/A
<b>Address:</b>	
<b>Tel:</b>	
<b>Fax:</b>	
<b>e-mail:</b>	

<b>Relevant Authority Notified</b>	<b>Yes</b>	<b>No</b>
		√

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

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

### 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 (within two weeks prior to date of application) 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 one (1) copy of the application.

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

### B.9 Population Equivalent & Fees

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

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

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

<b>Population Equivalent</b>	<b>2,753</b>
<b>Data Compiled (Year)</b>	<b>2008</b>
<b>Method</b>	<b>Described Below.</b>

In order to determine the population in the agglomeration two different methods have been used:

1. Geodirectory (Houses count):

The location and details of all properties located within the scheme area was obtained from the Geodirectory. Geodirectory is the complete database of buildings in the Republic of Ireland. It assigns each property its own individual fingerprint – a unique, verified address in a standardised format, together with a precise Geocode. Using the 2006 census data occupancy rate per house for the permanent residential addresses in each DED it has been possible to estimate the population in the agglomeration.

## 2. Contacting Caravan Park Owners and Local Area Planners:

The information given by the Caravan Park Owners and Local Area Planner enabled us to validate our preliminary estimations.

Rosscarbery and particularly Owenahincha are touristic locations; the winter population in the agglomeration, which represents the permanent population, is 695 persons, who consists of 93 persons in Owenahincha and 602 persons in Rosscarbery. During the touristic season, the population in Rosscarbery and Owenahincha peak and consists of 1,317 and 1,795 people respectively.

The total population equivalent given in the application form is the population equivalent in summer, which is 2,753pe and in winter the population equivalent is 884pe.

### **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.

### **Method of Calculating Pending Development**

Planning permissions have been granted for the following development in Owenahincha:

- 146 Mobile Home Units.
- 95 Apartments (touristic accommodations).
- 128 Bedrooms in Hotel.
- 7 Houses (permanent residential addresses).

The 2006 Census was used to determine the occupancy rate per house for the permanent residential addresses. The Cork County rural average occupancy in the 2006 Census was 2.96 persons per house. For the mobile homes and apartments in the villages it is assumed that they will be occupied by extended families and friends and therefore the occupancy of these units will be greater than permanent residence houses for the summer periods – hence it is assumed that an average of 4 persons will occupy these units during the peak summer months. An average occupancy of 2 was assigned to the hotel rooms, as it seems reasonable to assume most guests will be couples.

**TABLE B.9.2: PENDING DEVELOPMENT IN OWENAHINCHA.**

Accommodation Type	Number of Units	Occupancy Rate (people per unit)	Population
Mobile Home Units	146	4	584
Apartments	95	4	380
Bedrooms in Hotel	128	2	256
Houses	7	2.96	21

The average BOD load is assumed to be 75 and 60g BOD/people/day for the people in hotel and for the other developments respectively.

**TABLE B.9.3: BOD LOAD AND CORRESPONDING P.E.**

Accommodation Type	Population	BOD load (gBOD/people/day)	P.E
Mobile Home Units	584	60	584
Apartments	380	60	380
Bedrooms in Hotel	256	75	320
Houses	21	60	21
<b>Total</b>	<b>1,241</b>		<b>1,305</b>

The effluent from the Mobile Home Units, the Apartments and the Hotel is commercial effluent. Therefore percentage of p.e to be contributed by the non domestic activities is then 98.4%.

In the case of Rosscarbery planning has been granted for the construction of 27 new houses. An occupancy rate of 2.96 people per house was assumed for the houses in Rosscarbery. In Rosscarbery the pending development is domestic only.

**TABLE B.9.4: PENDING DEVELOPMENT IN ROSSCARBERY.**

Accommodation Type	Number of Units	Occupancy Rate (people per unit)	P.E
Houses	27	2.96	80

The following table presents the total population and associate population equivalent in Rosscarbery and Owenahincha including the pending development.

**Ability of the wastewater works to accommodate extra load**

The extra load due to the pending development is summarised on Table B.9.5. The septic tanks at Creggane are designed to cater a population of 5,239 peoples (please refer to Section C.1 for more details); therefore the capacity is sufficient to accommodate this extra hydraulic and organic loading.

**TABLE B.9.5: SUMMARY OF POPULATION AND POPULATION EQUIVALENT IN THE AGGLOMERATIONS.**

Year and Season	Total Population		Total Population Equivalent.	
	2008		2008	
	Winter	Summer	Winter	Summer
Owenahincha	114	3,036	144	2,825
Rosscarbery	682	1,397	841	1313
Total	796	4,433	985	4,138

**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 agglomerations with a population equivalent of 2,001 to 10,000	€25,000

Appropriate Fee Included	Yes	No
		✓

**B.10 Capital Investment Programme**

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

**Programme of Works**

The Creggane treatment plant does not have sufficient capacity to cater for the predicted development in the agglomeration for a 20 year horizon. A program of work has been prioritized to upgrade the WWTP. The work has been divided in two phases.

Phase 1: Construction of a new WWTP to improve the treatment quality and the control systems to cater for the present peak summer population of agglomeration (2008).

Phase 2: Increase the capacity of the plant to cater for the predicted future development of the agglomeration (2028).

The design criteria for phase 1 and 2 is given in table below

**TABLE B.9.5: DESIGN CRITERIA FOR PLANT UPGRADE**

Comment [d1]: B.10.1

	Phase1	Phase2
Capacity	4,200 pe	7,100 pe
Dry Weather Flow	696 m <sup>3</sup> /day	1,192.3 m <sup>3</sup> /day
BOD load	243kg/day	422.5 kg/day

It should be noted that pending developments have been included in the design population in Phase 1.

**Work to be undertaken and likely timeframe.**

**Phase 1 –2009 - 2010**

- Inlet works:

All incoming sewage at the WWTP will be screened to 6 mm in the inlet works. The screenings will be washed, dewatered and compacted on site so that they could be collected in a covered skip and dispose in accordance with the waste strategy for the region

- Secondary treatment:

In order to retain the option of Design/Build or Design/Build/Operate procurement, the design of the treatment process is not be too prescriptive at this stage of the project. The appropriate approach that will be taken is to specify the treatment standard and to accept any proven technology that will achieve such a treatment standard.

In the case of Rosscarbery and Owenahincha, where the treatment standard is 25:35 for BOD:SS, it is likely that the most suitable treatment process would be an Activated Sludge Plant or a Sequential Batch Reactor (SBR) system. The treatment plant will be designed to provide treatment for the estimated current winter and summer loads.

Due to the fluctuating loads a likely treatment would consist of having two SBRs working during the months of October through to April and a third SBR being brought on-line during the busy summer months. During the winter, the filling and aeration would take place in the first SBR which would be followed by settling and decanting in that same tank. During this settling and decanting period, filling and aeration would take place in the second tank. Another variation of this can be utilised to optimise operations by using the first SBR as a storage tank hence the filling will take place in the first tank and the aeration, settling and decanting in the other. This operation would be utilised in the off peak winter months when the population equivalent could be as low as 796 p.e. In the case of the summer months, the third SBR will provide the additional capacity.

- Storm water tank:

A storm water tank shall be built to cater for 3 DWF (696 m<sup>3</sup>/day) and have a capacity of two hours storage. The storm tank will have a cleaning unit consisting of a tipping bucket or similar operation.



- Sludge storage and thickening:

The sludge generated from the secondary treatment process will be thickened on site to achieve dry-solids content in the region of 2 – 3%. This thickened sludge will then be tankered off site, for de-watering and further treatment.

- Existing septic tank rehabilitation:

The existing septic tank will be part of the process, used as tidal holding tanks fitted with lunar clocks in order to discharge the effluent on ebbing tides. Thus, the risk of discharge on low water is diverted and in addition, the discharge flow will be taken out to sea and hence does not risk penetrating the Rosscarbery estuary.

- Existing outfall restored:

The existing outfall will be extended out beyond the low water level and will be used as discharge pipe.

**Phase 2, 2019 - 2020**

- Secondary treatment:

Additional capacity will be provided in the form of another aeration basin and supporting plant or an additional SBR unit. This unit/process shall be built to increase the treatment capacity up to the 20 years horizon requirements.

- Storm water tank:

A new storm water tank, similar to the tank describing above would be built. The two tanks would be able to cater for 3 DWF (DWF= 1,192 m<sup>3</sup>/day) and have a capacity of two hours storage.

Consent of competent owner required for any other use.

**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
		√

**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.

The foreshore license application is currently being prepared.

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

Attachment included	Yes	No
		√

For inspection purposes only.  
Consent of copyright owner required for any other use.

## SECTION C: INFRASTRUCTURE & OPERATION

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

### C.1 Operational Information Requirements

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

#### C.1.1 Storm Water Overflows

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

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

#### C.1.2 Pumping Stations

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

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

### Description of the plant process and design capacity:

Rosscarbery and Owenahincha villages are served by two independent sewerage networks which were constructed in the 1980s and 1970s respectively. Wastewater is pumped to treatment plant at Creggane (adjacent to Owenahincha), from where its discharge to the sea.

The treatment plant is constituted by two identical settlement tanks which provide a primary treatment. Both tanks can be supplied from either village. The capacity of the tanks is 945m<sup>3</sup> (22.5m long by 7meters wide by an average of 3m deep each).

In order to assess the design capacity (design population) of the septic tanks the following calculation was used:

$$C = 180P + 2000,$$

where C is the capacity of the tank (in litres) and P is the design population. Using this formula the combined septic tanks can sufficiently cater for a population of 5,239 persons.

It should be noted that this formulae was obtained from BS6297 1983, this standard has been superseded in 2007 (BS6294 2007); however the new standard does not give any formula for assessing the capacity of septic tanks. So for the basis of this application BS6297 1983 is used.

The septic tanks provide primary settlement only, which according to the National Urban Waste Water Study (NUWWS) reduces the BOD load by approximately 30% and the Suspended Solids load by approximately 50%.

**List of all abatement, treatment or recovery systems:**

There is not currently any abatement, treatment or recovery systems use within the waste water works other than the primary treatment. Each septic tank is desludged on every other year and the sludge is transported off site for treatment.

**Control system description.**

There is not currently any control system. Samples may be taken manually from the outfall chamber manhole, SW01 Ross/Owen (Map Ross/Owen B2 - 01)

**Stormwater Overflows**

As described in the section B.5 of the application the Rosscarbery/Owenahincha sewerage network consist of six storm water overflow discharge points. Details of the stormwater overflow (SWOs) discharge points is given in Table C.1.1.

**TABLE C.1.1 DESCRIPTION OF STORMWATER DISCHARGE POINTS.**

Type of discharge	Unique point code	Receiving Water Body type	Receiving Water Body Name	Grid ref
Open pipe	SW01 Ross Owen	Coastal	Rosscarbery Bay	130186E, 035039N
Outfall pipe	SW02 Ross Owen	River	Rosscarbery Stream	128531E, 036287N
Outfall pipe	SW03 Ross Owen	Transitional Water	Rosscarbery Lagoon	128819E, 036591N
Outfall pipe	SW04 Ross Owen	Transitional Water	Rosscarbery Lagoon	129103E, 036897N
Outfall pipe	SW05 Ross Owen	Coastal	Rosscarbery Bay	129297E, 036182N
Outfall pipe with non return flap valve	SW06 Ross Owen	River	Owenahincha Stream	130782E, 035452N

For each one of these SWO discharge points, an assessment to determine compliance with the criteria for storm water overflows, as set out in the DoEHLG

guidance has to be provided. In assessing the operation of an existing SWO's, the guidance requires that one must determine if it:

- *“causes significant visual or aesthetic impact and public complaints,*
- *causes deterioration in water quality in the receiving water,*
- *gives rise to failure in meeting the requirements of national Regulations on foot of EU Directives,*
- *operates in dry weather.”*

The “*standards for consenting storm water overflows into or in close proximity to bathing areas and water contact/recreational use waters*” set out by the National Rivers Authority in the UK, will be used to take into account the Warren and Owenahincha beaches which are close to the discharge points.

The relevant criteria specified by the National Rivers Authority in the UK can be summarised as follows:

- *“The maximum number of independent storms events discharged via the SWO must not, on average, exceed 3 per bathing season for identified bathing waters unless it can be shown that the design will*
- *achieve the water quality standards of the Bathing Water Directive for at least 98.2% of the time.*
- *The maximum number of independent storm events discharging via storm water overflows affecting water contact/recreational uses waters must not, on average, exceed 7 times per bathing season.*
- *The soffit level of the overflow outfall must be located below the level of the low water mark of mean spring tides (MLWS); otherwise a spill frequency criterion of 1 spill in 5 bathing seasons will apply.*
- *Normally the incoming flow must exceed that calculated from “Formula A” before the storm water overflow spills unless there are high dilutions available.*
- *Discharge flows are required to be screening to at least 10mm and where the frequency of spill is greater than once per year 80% of the volume should be screening to at least 6mm.”*

#### **Method of assessment.**

- a) “Formula A” has been calculated for each SWO's.
- b) Cork County Council has been consulted.
- c) Simulation of flow in network using WinDes Model.

#### **SWO's assessment.**

##### A. Formula A calculations

The “Formula A” is defined as follows:

$$\text{Formula A} = \text{DWF} + 1.36\text{P} + 2\text{E}$$

where ‘P’ is the population served and ‘E’ is the industrial effluent flow. The population served and the industrial effluent flows in the SWO's catchment have been estimated using the Geodirectory. In the case of 4 of the 5 overflows the

discharge point is remote from and upstream of the overflow point (which is in the pumping station). Therefore the capacity of the pumping stations must be at least equal to the respective "Formula A" flow calculation to ensure that overflow does not operate during dry weather flow conditions. Table C.1.2 below summarises the SWO assessment. It should be noted that the pumping stations capacities were obtained from the Owenahincha Preliminary Report.

**Table C.1.2: Summary of Formula A calculations.**

Discharge Point	Formula A flow (l/s) <sup>1</sup>	Pumping capacity of associate pump (l/s).
SW02 Ross/Owen (Pump Station at Celtic Ross Hotel)	5.1	24.0
SW03 Ross/Owen (Pump Station at Jetty)	6.6	40.0
SW04 Ross/Owen (Pump Station at Mill Road)	0.6	8.5
SW05 Ross/Owen (Main Pump Station Rosscarbery)	14.6	22.7
SW01 Ross/Owen (Pump Station at Owenahincha Bridge)	8.6	17.0

<sup>1</sup> It should be noted that Formula A calculation is in m<sup>3</sup>/day, however this has been converted to l/s in order to compare

In order for the stormwater overflow to spill the incoming flow (Formula A) has to exceed the pumping capacity of the respective pumping station. As can be seen in Table C.1.2 all of the pump capacities are greater than "Formula A" and hence all of the Stormwater overflows chambers meet the requirement to pass forward "Formula A" under dry weather flow conditions.

**B. Cork County Council Consultation.**

The curator of the scheme was consulted in order to obtain the necessary information in relation to the storm overflows and pumping stations. The curator informed Fehily Timoney and Company that the storm water overflows have never spilt unless there is a problem with the pumps.

**C. Simulation of WinDes Model**

A hydraulic model for Rosscarbery / Owenahincha sewerage scheme has been built and the flow conditions have been simulated. However, the validation and verification of this model is not yet complete. Based on initial data obtained from the hydraulic model it would appear that four of the pumping stations will spill during a 1 year design storm (this will be confirmed or otherwise once the model has been verified). Thus, it would appear that up to four SWOs (SW01, 02, 04 & 05 Ross/Owen) may not comply with DoEHLG 'Procedure and Criteria in Relation to Stormwater Overflow'. Once the hydraulic model is verified, the number of spills during the bathing season will be determined and the impact on the receiving waters quantified. It will then be possible to definitively ascertain if these SWOs comply with DoEHLG criteria on SWOs. The proposed upgrades in the preliminary report will include any works required to the overflow chambers upstream of the pumping stations in Rosscarbery and Owenahincha to ensure that all overflows in the system comply with the DEHLG Paper on SWOs for existing and future flows.

## Pumping Stations

As shown in Map Ross Owen B4 – 01 there are five pumping stations throughout the Rosscarbery Owenahincha network. It should be noted that there are no possible measures taken in the event of power failure. However in the proposed works a mobile generator will be provided for pump stations (PS) P4 and P5.

All the five PS have emergency overflows. The discharge point is generally upstream of the pumping station on the network which operates when the PS has either reached capacity or in event of pump failure. The grid reference of the discharge location and other details of the PSs is given in Table C.1.3.

**TABLE C.1.3: DETAILS OF PUMPING STATIONS**

Pumping Station	Approx. Location	Pumping Arrangement	Storage Capacity	Receiving Water	
				Body Name	Grid ref
P1	Celtic Ross Hotel	Duty/Assist	17m <sup>3</sup>	Rosscarbery Stream	128531E, 036287N
P2	Near Boating Jetty	Duty/Assist	6m <sup>3</sup>	Rosscarbery Lagoon	128819E, 036591N
P3	Mill Road	Duty/Assist	14 m <sup>3</sup>	Rosscarbery Lagoon	129103E, 036897N
P4	Strand Road	Duty/Assist	48 m <sup>3</sup>	Rosscarbery Bay	129297E, 036182N
P5 <sup>1</sup>	Owenahincha Bridge	Duty Standby	39 m <sup>3</sup>	Owenahincha Stream	130782E, 035452N
		Duty/Assist	20m <sup>3</sup>	Rosscarbery Bay	130186E, 035039N

<sup>1</sup> P5 consists of two sumps (storm and foul)

The analysis of the pump stations (Formula A Calculation) indicated that the pumps are adequate for the dry weather flow and therefore there is no emergency overflow during normal operation. Furthermore, according to Cork County Council there has been no pump failure in the past year.

**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.

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

**C.2 Outfall Design and Construction**

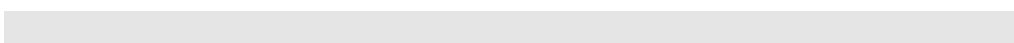
Provide details on the primary discharge point & secondary discharge points and storm overflows to include reference, location, design criteria and construction detail.

**TABLE C.2.1: DETAILS OF DISCHARGE OUTFALLS**

Discharge	Reference	Location	Design Criteria	Construction Detail
Primary	SW01 Ross/Owen	130186E, 035039N	225mm diameter outlet at a slope of 1 in 1.5	Cast Iron pipe laid to low water level
Secondary	SW02 Ross/Owen	128531E, 036287N	200mm overflow pipe. Emergency overflow at 5m OD (poolbeg)	Discharging to Rosscarbery Stream approx. 100m upstream of PS
Secondary	SW03 Ross/Owen	128819E, 036591N	200mm overflow pipe. Submerged pumps	Discharging to Lagoon approx. 50m upstream of PS
Secondary	SW04 Ross/Owen	129103E, 036897N	200mm overflow pipe. Emergency overflow at 4.5m OD (poolbeg)	Discharging to Lagoon approx. 100m upstream of PS
Secondary	SW05 Ross/Owen	129297E, 036182N	300mm overflow pipe. Emergency overflow invert at 5.5m OD (poolbeg)	Discharging to Rosscarbery Bay approx. 75m upstream of PS
Secondary	SW06 Ross/Owen	130782E, 035452N	300mm overflow pipe. Emergency overflow invert from storm sump at 5.4m OD (poolbeg)	Discharging directly to Owenahincha stream.

**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.

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





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

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

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

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

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

**D.1 Discharges to Surface Waters**

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

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

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

Attachment included	Yes	No
	√	

## D.2 Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

**Table D.2:**

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING
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.

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EAST	NORTH	VERIFIED
SW01 Ross/ Owen	Primary and Storm Water Overflow	CCC	Coastal	Rosscarbery Bay	NONE	130186	035039	N
SW02 Ross/ Owen	Storm Water Overflow and Secondary	CCC	River	Rosscarbery Stream	NONE	128531	036287	N
SW03 Ross/ Owen	Storm Water Overflow and Secondary	CCC	Transitional Water	Rosscarbery Lagoon	NONE	128819	036591	N
SW04 Ross/ Owen	Storm Water Overflow and Secondary	CCC	Transitional Water	Rosscarbery Lagoon	NONE	129103	036897	N
SW05 Ross/ Owen	Storm Water Overflow and Secondary	CCC	Coastal	Rosscarbery Bay	pNHA	129297	036182	N
SW06 Ross/ Owen	Storm Water Overflow and Secondary	CCC	River	Owenahincha Stream	NONE	130782	035452	N

## SECTION E: MONITORING

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

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

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

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

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

### E.2. Monitoring and Sampling Points

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

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

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

Details of any accreditation or certification of analysis should be included.

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

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](http://www.epa.ie). This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and F.2.

PT_CD	PT_TYPE	MON_Type	EASTING	NORTHING	VERIFIED
SP01 Ross/Owen	Primary	Sampling	130185E	035057N	N

### E.4 Sampling Data

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

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

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

Attachment included	Yes	No
	✓	

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

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

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

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

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

- Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.
- Details of all monitoring of the receiving water should be supplied via the following web based link: [http://78.137.160.73/epa\\_wwd\\_licensing/](http://78.137.160.73/epa_wwd_licensing/). Tables F.1(i)(a) & (b) should be completed for the primary discharge point. Surface water monitoring locations upstream and downstream of the discharge point shall be screened for those substances listed in Tables F.1(i)(a) & (b). Monitoring of surface water shall be carried out at not less than two points, one upstream from the discharge location and one downstream.
- For discharges from secondary discharge points Tables F.1(ii)(a) & (b) should be completed. Furthermore, provide summary details and an assessment of the impacts of any existing or proposed emissions on the surface water or ground (aquifers, soils, sub-soils and rock environment), including any impact on environmental media other than those into which the emissions are to be made.
- Provide details of the extent and type of ground emissions at the works. For larger discharges to groundwaters, e.g., from Integrated Constructed Wetlands, large scale percolation areas, etc., a comprehensive report must be completed which should include, inter alia, topography, meteorological data, water quality, geology, hydrology, and hydrogeology. The latter must in particular present the aquifer classification and vulnerability. The Geological Survey of Ireland Groundwater Protection Scheme Dept of the Environment and Local Government, Geological Survey of Ireland, EPA (1999) methodology should be used for any such classification. This report should also identify all surface water bodies and water wells that may be at risk as a result of the ground discharge.

- o 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.
  - o 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.
  - o 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.
  - o Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on –
    - (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive) –
      - (i) notified for the purposes of Regulation 4 of the Natural Habitats Regulations, subject to any amendments made to it by virtue of Regulation 5 of those Regulations,
      - (ii) details of which have been transmitted to the Commission in accordance with Regulation 5(4) of the Natural Habitats Regulations, or
      - (iii) added by virtue of Regulation 6 of the Natural Habitats Regulations to the list transmitted to the Commission in accordance with Regulation 5(4) of those Regulations,
    - (b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC<sup>1</sup> in accordance with the procedures laid down in Article 21 of that Directive,
    - (c) a special area of conservation within the meaning of the Natural Habitats Regulations, or
    - (d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC<sup>2</sup>;
- <sup>1</sup>Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ No. L 206, 22.07.1992)
- <sup>2</sup>Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (OJ No. L 103, 25.4.1979)

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

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

### Details and Assessment of the Impact of Emissions on Receiving Water

As stated in Section B.3, B.4 B.5 there are both primary and secondary discharge points. The primary discharge point (SW01 Ross/Owen) is at the outfall to the septic tanks as shown on Map B3 - 01. There are 5 secondary discharge points in the agglomeration. These discharge points are emergency and stormwater overflow from the respective pumping stations and shown on Map B4 - 01. Please note that:

1. All the discharges are to surface waters and hence the groundwater assessment is not applicable.
2. The background water quality at the primary discharge point is detailed in table F.1.(ii) a and b in Attachments. In relation to the remaining background water quality a available data related to the Coliforms and Streptococci and is presented in tables F.1.1 and F.1.2 below.

**TABLE F.1.1: OWENAHINCHA BEACH MONITORING DATA.**

Parameter	Faecal Coliforms	Total Coliforms	Faecal Streptococci
Sample Date	cfu/100ml	MPN/100ml	cfu/100ml
11-May-04	0	0	0
25-May-04	0	0	0
08-Jun-04	0	0	17
22-Jun-04	33	40	14
06-Jul-04	4	6	15
20-Jul-04	60	90	0
03-Aug-04	2	2	2
17-Aug-04	40	40	5
31-Aug-04	0	2	0
17-May-05	0	0	0
31-May-05	0	0	1
14-Jun-05	0	1	0
28-Jun-05	4	4	1
12-Jul-05	0	0	0
26-Jul-05	0	2	0
10-Aug-05	2	2	2
23-Aug-05	0	4	0
16-May-06	0	0	0

30-May-06	0	0	0
13-Jun-06	0	1	0
27-Jun-06	0	4	0
11-Jul-06	1	2	0
25-Jul-06	0	0	0
08-Aug-06	0	0	0
22-Aug-06	0	4	2
22-May-07	0	6	4
05-Jun-07	0	0	0
18-Jun-07	0	0	0
03-Jul-07	2	26	1
17-Jul-07	3	3	1
31-Jul-07	2	3	0
13-Aug-07	0	0	0
28-Aug-07	1	10	0
20-May-08	2	2	0
03-Jun-08	1	1	0

**TABLE F.1.2: WARREN BEACH MONITORING DATA.**

Location Easting	Location Northing	Sample Date	Faecal Coliforms	Total Coliforms	Faecal Streptococci
			cfu/100ml	MPN/100ml	cfu/100ml
129788.4	35117.3	18-May-04	3	5	3
129788.4	35117.3	25-May-04	0	0	0
129788.4	35117.3	08-Jun-04	0	0	1
129788.4	35117.3	22-Jun-04	185	> 600	35
129788.4	35117.3	29-Jun-04	10	10	7
129788.4	35117.3	06-Jul-04	1	3	16
129788.4	35117.3	22-Jul-04	10	35	5
129788.4	35117.3	04-Aug-04	2	40	1
129788.4	35117.3	17-Aug-04	14	16	5
129788.4	35117.3	31-Aug-04	4	8	3
129788.4	35117.3	17-May-05	0	0	2
129788.4	35117.3	31-May-05	0	0	0
129788.4	35117.3	14-Jun-05	67	82	0
129788.4	35117.3	28-Jun-05	8	10	7
129788.4	35117.3	12-Jul-05	0	0	0
129788.4	35117.3	26-Jul-05	7	11	6
129788.4	35117.3	10-Aug-05	1	2	1
129788.4	35117.3	23-Aug-05	2	2	6
129788.4	35117.3	16-May-06	6	34	6
129788.4	35117.3	30-May-06	0	0	1
129788.4	35117.3	13-Jun-06	12	12	0
129788.4	35117.3	27-Jun-06	1	16	6
129788.4	35117.3	11-Jul-06	47	180	65
129788.4	35117.3	25-Jul-06	4	16	5
129788.4	35117.3	08-Aug-06	0	0	2
129788.4	35117.3	22-Aug-06	6	56	44
129788.4	35117.3	28-Aug-06	1	4	5



129788.4	35117.3	22-May-07	0	4	1
129788.4	35117.3	05-Jun-07	0	1	1
129788.4	35117.3	18-Jun-07	0	0	1
129788.4	35117.3	03-Jul-07	8	40	2
129788.4	35117.3	17-Jul-07	1	1	4
129788.4	35117.3	31-Jul-07	17	17	4
129788.4	35117.3	08-Aug-07	5	12	4
129788.4	35117.3	13-Aug-07	8	15	4
129788.4	35117.3	28-Aug-07	32	37	10
129788.4	35117.3	20-May-08	4	11	0
129788.4	35117.3	03-Jun-08	2	3	1

The following sections detail the impact of the discharges:

### Impact of Primary Discharge

The primary discharge SW01 Ross/Owen discharges into the Rosscarbery Bay which is adjacent to a designated National Heritage Area (pNHA) and designated Bathing Waters.

The impact on the pNHA, in particular the young oyster that are currently grown in the Rosscarbery Estuary, is minimised by the level of dilution and mixing that takes place in the Rosscarbery Bay. Furthermore results from the floating study (1971) state that floats had not reached the Owenahincha Strand after 9 hours. It can be assumed from this that the primary discharge is negligible impact on the pNHA

Owenahincha Beach and the Warren Beach (Creggane Strand) are designated bathing areas, and hence the provisions of these regulations apply to the receiving waters. Furthermore, both Owenahincha Beach and The Warren Beach (Rosscarbery) are blue flag beaches. Table F.1.3 details the limits specified in the bathing water regulations. As the receiving waters are designated bathing areas these parameters can not be exceeded on two consecutive samples.

**TABLE F.1.3: BATHING WATER REGULATION SPECIFICATIONS.**

Parameter	Unit	To be conformed within 95% or more of samples	To be conformed within 80% or more of samples
Total Coliforms	/100 ml	10,000	5,000
Faecal Coliforms	/100 ml	2,000	1,000
pH		6.0 - 9	
Phenols	Mg/litre	≤ 0.05 and no specific odour.	
Faecal streptococci	No./100ml	≤ 300	
Dissolved Oxygen	% saturation O <sub>2</sub>	≤ 70 and ≤ 120	
Salmonella	No./litre	0	
Enteroviruses	PFU/10 litres	0	

Analyses of the Bathing Waters are summarized in Table F.1.4 below and the data sampled for the Warren and Owenahincha Beaches between May 2004 and June 2008 is given in Table F.1.1 and F.1.2 above

**TABLE F.1.4: SAMPLES DATA SUMMARY.**

Bathing area		Unit	Total Coliforms /100 ml	Faecal Coliforms /100 ml	Faecal Streptococci /100 ml
Warren beach	Average	/100 ml	18.5	12.3	6.9
	Maximum	/100 ml	185	> 600	35
Owenahincha beach	Average	/100 ml	7.3	4.5	1.9
	Maximum	/100 ml	90	60	17

As can be seen from Table F.1.4 the amount of pollution did not exceed the standards specified in the Bathing Water Regulations and hence indicates that the primary discharge has negligible impact on the bathing areas in the vicinity.

### Impact of Secondary Discharge Points

Secondary and stormwater overflow discharges may occur into Rosscarbery Lagoon (SW03 and SW04 Ross/Owen), into the north of the Rosscarbery estuary (SW05 Ross/Owen) and into the Rosscarbery and Owenahincha Streams, SW02 and SW06 Ross/Owen respectively.

The hydraulic model for Rosscarbery Owenahincha sewerage scheme has been built and the flow conditions have been simulated. However, the validation and verification of this model is not yet complete. Based on initial data obtained from the hydraulic model it would appear that four of the pumping stations will spill during a 1 year design storm (this will be confirmed or otherwise once the model has been verified). Once the hydraulic model is verified, the number of spills during the bathing season will be determined and the impact on the receiving waters quantified. However, as the secondary discharges are only infrequent stormwater overflow the impact on the receiving waters is negligible.

Furthermore, it should be noted that Cork County Council has stated that no discharges, emergency or storm water overflows occurred in the past year.

### Existing environment in terms of water quality

The existing environment in terms of water quality was assessed using all the available data from The Water Framework Directive, Cork County Council Bathing Water Assessment and the float study undertaken in 1971.

#### (i) Owenahincha River:

The river obtained a 1b score in the water framework assessment in 2005. The score 1b means that the water body is “thought to be at risk of failing to meet the objective, pending further investigation”. The discharge to this river only occurs when the foul and storm sump have overflowed. The combined capacity of the sumps is 58l/s. As the preliminary results from the WinDes model suggest that this

pump station does not spill for a one year storm the quality of the river is considered not to be at risk.

**(ii) Rosscarbery Bay:**

An area adjacent to the discharge point is designated a proposed Natural Heritage Area. The site synopsis for Rosscarbery Bay (001075) states that “The mouth of the inlet is nearly closed by a broad spit of sand behind Creggane Strand but above this there are extensive sand flats where quays and a training wall indicate a former maritime importance. Currently the site is used for growing young oyster stock in cages”.

Rosscarbery Bay was assessed to have a score of 2a in the Water Framework Directive which means “body is expected to meet good status in 2015, pending further investigation”. The discharges into the bay, via the primary outfall is not considered to be a risk to the water quality in the bay: the volume of water, mixing and dilution available guarantees good assimilation by the sea.

The oyster farms are situated about 2km from the primary discharge point, hence it can be estimated, based the 1971 float survey that the time of travel to the oyster farms would be approximately 30 hours. It is assumed that the percentage of bacteria which may reach the farms is negligible according to the decay rate calculation.

**(iii) Designated Bathing Waters**

As stated previously the Owenahincha and Warren Beaches are Designated Bathing Waters. For this reason these beaches are monitored for Faecal Coliforms, Total Coliforms and Faecal Streptococci. As can be seen in Tables F.1.1 and F.1.2 above the standards specified in the Bathing Water Directive were not exceeded in the period from May 2004 to June 2008.

It should also be noted that these beaches/bathing areas have restored their blue flag beach status which further illustrates that the emission from the septic tanks has no significant effects on the receiving water body.

**(iv) Rosscarbery Lagoon.**

Rosscarbery Lagoon obtained a score of 1b in the Water Framework Directive i.e. “thought to be at risk of failing to meet the objective, pending further investigation”. There are two discharge points into the Rosscarbery Lagoon. Both are secondary discharges and hence only an intermittent risk of contamination..

Preliminary results from the WinDES model indicate that only one of the pumping stations (P3) spills into the lagoon on a 1 year storm. As stated previously this secondary discharge is only infrequent stormwater overflow and hence the impact on the lagoon is negligible.

## **Dangerous Substances Regulations S.I. No. 12 of 2001**

The Dangerous Substances Regulations define the main polluting pesticides, solvent and metals which have significant effects on the environment. As the load to the WWTP is mainly domestic and tourism with no industrial contribution it can be assumed that the presence of these substances is negligible. The main parameters which impact the receiving environment are limited to BOD, suspended solid and bacteria (total and faecal coliform, faecal Streptococci).

## **Water Abstraction Downstream**

No water abstraction points exist downstream of any of the discharge location (primary or secondary).

## **Habitat Directive 92/43/EEC and Birds Directive 79/409/EEC**

The Council Directive 97/11/EC (O.J. No. L73/5, 14 March 1997) was transposed into Irish Legislation via the European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1999, (S.I. No. 93 of 1999). The first schedule of these regulations details the developments that require an EIA by law. Part I (13) of the first schedule specifies the requirement for "Waste water treatment plants with a capacity exceeding 150,000 population equivalent" to undergo an EIA. Part II (11) (c) of the schedule specifies the requirement for "Waste water treatment plants with a capacity greater than 10,000 population equivalent" to undergo an EIA. These specifications apply under various conditions.

The design population equivalent in the year 2027, of the Rosscarbery/Owenahincha wastewater treatment plant is 7,100 and, hence, is classified as a sub-threshold development which does not require an EIA. However, in accordance with Article 120 of the Planning and Development Regulations 2001 (S.I. No. 600 of 2001), an EIA should be undertaken for a sub-threshold development under the following circumstances:

- (i) where a Local Authority "*considers that the development would be likely to have significant effects on the environment*" or
- (ii) where the development "*would be located on or in*" an environmentally sensitive site noted in the Wildlife (Amendment) Act, 2000 (No. 38 of 2000) and would "*be likely to have significant effects on the environment of such a site, area or land*".

While neither the proposed wastewater treatment plant nor the proposed point of discharge (assuming the existing outfall will be extended by approximately 100 m) is a designated site, there are some designated sites in close proximity. Rosscarbery Estuary is designated a proposed Natural Heritage Area (pNHA-1075). The WWTP and outfall are located approximately 250 m and 400 m respectively from the closest designated area (pNHA-1075).

A large Special Protected Area (SPA) is designated along the south west coast of the county - Sheep's Head to Toe Head (SPA-4156). This site supports two bird species listed in Annex 1 of the EU Bird's Directive - Chough and Peregrine – and the nationally important Black Guillemot. This SPA is situated approximately 10 km from the proposed development and as a result, should not be affected by it.

The proposed Natural Heritage Areas (pNHAs) cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wild plant and animal species or a diversity of these natural attributes. It is important that the conservation value of these areas, which are proposed for designation from time to time by the Heritage Service, be maintained.

A candidate Special Area of Conservation (cSACs) is selected based on the support it offers to habitats and plant and animal species that are rare or threatened in Europe and requires particular measures, including the designation of protected sites, to conserve them. The sites are called 'candidate sites' because they are currently under consideration by the Commission of the European Union. Together with the SPAs they form part of the 'Natura 2000' network of sites throughout Europe.

The development is not considered likely to have significant environmental effects on these sites as a high level of treatment and a high level of dilution and dispersion of the discharged effluent is proposed. The wastewater will receive secondary treatment once the proposed works are completed and the proposed wastewater treatment plant can also be retrofitted with Ultra-Violet (UV) disinfection to produce an even higher treatment standard if required. The treated effluent will then be discharged to the sea which will ensure significant dilution.

It is concluded that the Rosscarbery/Owenahincha Sewerage Scheme will not cause a significant environmental impact and is not located within a designated area. The development does not require an Environmental Impact Assessment (EIA). The existing and proposed facilities are compliant with the Habitat Directive and the Birds Directive.

**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 m <sup>3</sup> /day	Point Code Provide label ID's	Distance Downstream in meters from Emission Point to Abstraction Point	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

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

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

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

## **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).

#### **Compliance with Council Directive**

At present there is no record of non compliance in relation to the emissions from the agglomeration and the treatment plant with the council directives. A programme of improvements, the new WWTP as detailed in section B.10, is at the preliminary design stage. Once this new WWTP has been constructed and commissioned the level of treatment, control and monitoring will be improved and hence further facilitate compliance with the Council Directives. The following details the compliance with the applicable directives.

#### ***Dangerous Substances Directives 2006/11/EC.***

The effluent for both agglomerations of Rosscarbery and Owenahincha is mainly touristic and domestic; the industrial contribution can be considered as negligible. For this reason, we can assume that any dangerous substances mentioned in the Dangerous Substances Regulations will not be present in the discharge.

The new WWTP proposed in the programme of improvement shall advance the level of control by increasing the number of sampling and monitoring points. The detection of any dangerous substances will be then facilitated.

### **Water Framework Directive 200/60/EC.**

The Rosscarbery Harbour (Rosscarbery Lagoon) and the Owenahincha stream are considered to be “possibly at risk of not achieving good status”.

In relation to the Rosscarbery Lagoon only one of the two emergency overflows discharge to the lagoon on a 1 year storm (based on preliminary results from the model). A programme of works which will be detailed in the Preliminary Report will include all necessary improvements to the SWOs in order to comply with the DoEHLG guidance.

As stated in Section C1, Owenahincha pumping station P5 consist of two sumps (foul and storm) and two overflows (discharge and storm). Hence, discharges to the Owenahincha stream will only occur when the inflow is greater than 58l/s. The frequency and hence impact of this discharge has been assessed as part of the WinDes simulation of the sewer network and preliminary results indicate that it doesn't spill for a 1 year storm. Therefore the river is at risk of not achieving good status from the emergency overflow.

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

This Directive concerns standards for water intended for human consumption. As there is no drinking water abstraction point in the vicinity of any of the discharge points, this directive is not applicable.

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

As stated in the S.I. No. 254 of 2001, Urban Waste Water Treatment Regulation, 2001:

“ A sanitary authority shall ensure by 31 December 2005 that urban waste water entering a collecting system shall before discharge be subject to appropriate treatment in the following cases:

- (a) in respect of discharges to freshwater and estuaries from agglomerations with a population equivalent of less than 2,000;
- (b) in respect of discharges to coastal waters from agglomerations with a population equivalent of less than 10,000.”

Therefore, as detailed in Section F.1, the discharge from the septic tanks is having negligible impact to the coastal waters and hence appropriate treatment is being provided; since the septic tanks are deemed to provide appropriate treatment it is currently complying with the Urban Waste Water Treatment Directive 91/271/EEC. Notwithstanding this compliance with the directive a programme of works as detailed in Attachment B.10 is proposed to cater for the future load i.e. 20 year design horizon.

**Habitat Directive 92/43/EEC and Birds Directive 79/409/EEC**

Compliance with the Habitat Directive and the Birds Directive for the existing and proposed facilities, has been established in section F 1 of this application. The existing primary and secondary emissions from the agglomeration have negligible impact on the surrounding habitats and birds as all emissions are to the aquatic environment where compliance to the Bathing Waters Directive has been achieved.

A programme of works is intended to be introduced that will improve the treatment of the wastewater discharge and control the emissions (odour) from the treatment plant itself.

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

As stated in the Section F.1, the impact of the discharges in these areas is negligible. The standards specified in the Bathing Water Directive were not exceeded in the period from May 2004 to June 2008. Hence the emissions from the present WWTP comply with the Bathing Water Directive. Furthermore, the quality of the effluent and the discharge conditions will be improved with the new WWTP and hence further compliance with the Bathing Water Directive will be assured.

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

The Environmental Liability Directive is about preventing and remedying environmental damage. It aims to hold operators whose activities have caused environmental damage financially liable for remedying this damage. As the operators (Cork Country Council) are implementing a programme of improvements. This ensures that no environmental damage will be caused by the future effluent discharges and hence comply with the Environmental Liabilities Directive.

**Shellfish Waters Directive (79/923/EEC)**

According to the European Communities (Quality of Shellfish Waters) Regulation 2006 Rosscarbery Bay and surrounding area are not a designated shellfish waters. Hence this directive is not applicable. However the pNHA (001075) for Rosscarbery Estuary states that a portion of the estuary is used for growing young oyster stock in cages. The improvements planned will ensure a higher effluent quality.

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

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



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

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

Not applicable for discharges into sea

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

Attachment included	Yes	No
		√

**G.3 Impact Mitigation**

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

**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
	√	

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**G.4 Storm Water Overflow**

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

As stated previously four of the six storm water overflows spill at least once a year. The preliminary report will include design proposals to ensure that all SWOs will comply with the criteria for storm water overflows, as set out in the DoEHLG 'Procedures and Criteria in relation to Storm Water Overflows', 1995.

**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
		√

**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 : Declan Groarke Date : 18/9/08  
(on behalf of the organisation)

Print signature name: DECLAN GROARKE

Position in organisation: SENIOR EXECUTIVE ENGINEER

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## SECTION I: JOINT DECLARATION

### Joint Declaration <sup>Note1</sup>

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

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

### Lead Authority

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

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

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

### Co-Applicants

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

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

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

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

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

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

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

# Table of Contents of Annex 1

## Section A – Non Technical Summary

Attachment A1 - Ross Owen A1-01 - Site Location Map of Agglomeration

## Section B – General

Attachment B1 - Ross Owen B1-01 – Rosscarbery Agglomeration Boundary Map  
- Ross Owen B1-02 – Owenahincha Agglomeration Boundary Map

Attachment B2 - Ross Owen B2-01 - Layout Plan of Wastewater Treatment Plant

Attachment B3 - Ross Owen B3-01 - Location of Primary Discharge Point

Attachment B4 - Ross Owen B4-01 -Location of Secondary Discharge Points

Attachment B5 - Ross Owen B5-01 - Location of Stormwater Overflow Discharge Points

Attachment B8 - Copy of the Site Notice  
- Original Newspaper Advertisement  
- Ross Owen B8-01 -Location of site notice

Attachment B9 - Fees

Attachment B10 - Costs and Likely Timeframe completion  
- Details of approved funding.  
Ross Owen B10 - 01 -Layout Plan of Proposed Wastewater Treatment  
Plan  
- Ross Owen B10 - 02 -Process Flow Diagram-Proposed Plant  
-

## Section C – Infrastructure and Operation

Attachment C1 - Ross Owen C1-01 -Process Flow Diagram-Existing Plant

## Section D – Discharges To The Aquatic Environment

Attachment D1 – Supporting information for discharges to surface waters

## Section E – Monitoring

Attachment E2 – Certificate of Analysis  
Attachment E4 – Sampling Data

## Section F – Existing Environment and Impact of the Discharges

Attachment F1 - Details of modelling carried out  
- Dilution Calculation

## Section G – Programme of Improvements

Attachment G1 - Recent Programme of Works  
- Funding and timeframe

Attachment G3 - Programme of Improvements.

## Tables E

Table E.1 (i) Wastewater Frequency and Quantity of Discharge – Primary and Secondary Discharges

Table E.1 (ii) Wastewater Frequency and Quantity of Discharge – Stormwater Overflows

## Tables F

Table F.1 (i) (a) Surface/Ground Water Monitoring – Primary Discharge

Table F.1 (i) (b) Surface/Ground Water Monitoring (dangerous substances) – Primary Discharge

Table F.1 (ii) (a) Surface/Ground Water Monitoring – Secondary Discharge

Table F.1 (ii) (b) Surface/Ground Water Monitoring (dangerous substances) – Secondary Discharge

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