CORK COUNTY COUNCIL

WESTERN DIVISION

WATER SERVICES

Re: Waste Water Discharge Licence Application for the Agglomeration of Bantry

Dear Sir / Madam,

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

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

This is a draft document and is subject to revision.

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Waste Water Discharge Licence Application Form

EPA Ref. Nº: *(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 Email: 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

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

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

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ABOUT THIS APPLICATION FORM

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

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

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

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

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

PROCEDURES

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

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

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

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

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

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.

SECTION A: NON-TECHNICAL SUMMARY

The waste water works for the agglomeration of Bantry includes all the sewers, their accessories and all structural devices for the collection, storage, treatment or discharge of waste water.

The existing sewerage scheme servicing the agglomeration of Bantry consists of a combined storm and foul gravity system which receives an existing load of approximately 7,200 p.e. Combined flows are directed to a pumping station located at Old Quay. The effluent treatment provided at the pumping stations is coarse screening only using a rake screen. From here the effluent is pumped via a 250mm diameter rising main to Black Rock where it is discharged approximately 60m from the shoreline at a rate of 48 l/sec (E098665, N048326 – SW1BANT). A 450mm diameter emergency overflow (E099274, N048609 – SW2BANT) will discharge to the inner harbour where there is a load in excess of 6 DWF at the pump station (i.e. when the capacity of the pumping station of 94.6 l/s is exceeded). The overflow is reported to discharge infrequently (approximately once per year).

Two rivers, the Alley and the Mill rivers, pass through Bantry Town. The Alley is a tributary of the Mill and both rivers are culverted as they pass through the town. The culvert discharges to the Inner Bay outside Wolfe Tone Square. The Local Authority is aware of a number of rogue discharges to the culverted sections of the rivers (E099733, N048352 – SW3BANT and E099761, N048432 – SW4BANT). It is proposed to investigate the locations of these unauthorised discharges and to divert them appropriately.

A second pump station is located at Reenrour to the north of Bantry Town. This pump station discharges into the collection system at a manhole near the entrance to of St. Cainirs Place. Effluent moves from here by gravity to the pumping station at Old Quay. The Reenrour pumping station holds one 7.5kW pump which operates at a rate of 10.2m³/hr and services approximately 50 houses. In the event of pump failure the effluent is discharged to a nearby drain via an emergency overflow (E099507 N049248 – SW5BANT) which flows to the nearby Cove.

A third pump station is located in Kilnaruane. This station accepts combined flows from the IDA to the south of Bantry Town. The station houses two 50Hz foul pumps which pump effluent to a manhole located on Rope Walk, at the end of the Bantry Town collection system. From here the effluent is discharged through the primary discharge at Black Rock (SW1BANT). There is an emergency overflow (E098918, N047734 – SW6 BANT) from this pump station which discharges to a local stream (waterbody code SW_21_6264). This overflow only operates if the pumps fail.

Two existing storm overflow pipes discharge from William Street and Marino Street Combined Storm Overflows (CSOs) to 350mm diameter storm sewers which also collect storm water from Wolfe Tone Square and ultimately discharge to the Inner Harbour. The CSO at Marino Street (E099758, N048455 – SW7BANT) operates whereby the flows to the chamber exceed 9DWF (50.4 l/s). The storm overflow at William Street (E099626, N048388 – SW8BANT) discharges whereby flows to the chamber exceed 6DWF.

The Environmental Impact Assessment undertaken in 1992 stated that up to 1.4 million litres per day of urban wastewater is discharged into Bantry Harbour, containing approximately 360 kg of biochemical oxygen demand (BOD) , 410 kg of suspended solids, 20.5 kg of phosphates, 67 kg of nitrogen, and faecal coliform bacteria. Effluent from the hospital, which may potentially contain viral contamination, is currently discharged directly to sewer without any pre-treatment. Samples of hospital wastewater and samples of wastewater at the pump station were taken for analysis as part of the environmental impact assessment undertaken for the scheme in 1992. Human enteric viruses were at concentrations below the detection limit in all of the samples taken.

The proposed new treatment system will result in a 95% reduction in BOD, suspended solids, and total phosphorous, and an 80% reduction in faecal coliform bacteria and total nitrogen. Additionally, as a safeguard, as part of the future sewerage scheme development, it is proposed to provide a separate drainage system for the 2 acute intensive care wards in the hospital. Wastewater from these wards will discharge to a new septic tank and soakway system.

The Bantry Sewerage Scheme upgrade is included as works to commence in 2008 under the Water Services Investment Programme 2007 – 2009 and a capital investment of €7,148,000 is proposed for the scheme. An environmental impact statement and a preliminary report for the scheme were produced in 1992. The upgrade works include the construction of a new waste water treatment facility at Blue Hill, and the upgrading and incorporation to the new scheme of the existing pumping station and collection system. Both existing CSOs from Marino Street and William Street are to be retained as part of the proposed sewerage scheme, however the flow to the main pump station will be reduced. The new facility will have a design p.e. of 6,000 and is to accommodate hydraulic loads of 1361 m³/day DWF and a maximum flow of 8166 m³/day (6 DWF). The future population of Bantry is expected to increase to 4,163 by 2015 (source: SWRBD).

The works are designed to provide a discharge standard of 20mg/l BOD and 30 mg/l suspended solids through preliminary treatment and primary sedimentation followed by secondary biological treatment (carrousel-type extended activated sludge treatment plant). The carrousel-type treatment will provide a contact zone which will allow for some nitrification/denitrification. A sludge holding tank is also to be provided and sludge treatment will be provided on site using a picket fence thickener and belt press system. Non-return sludge will be removed from site for further treatment or disposal. The final discharge of treated effluent will be via a tidal holding tank and marine outfall with diffuser.

Construction of the wastewater treatment plant has begun. The Works are expected to be operational in 2009.

The existing primary discharge at Black Rock releases coarsely screened effluent into the inner harbour which forms part of the Bantry Bay designated shellfish area as designated under the European Communities (Quality of Shellfish Waters) Regulations 2006 (S.I No. 268 of 2006). Aquaculture is one of the larger commercial activities in the area. One of the main activities is longline mussel culture. Licensed sites within Bantry Bay are classified ‘A’ and ‘B’ for mussels and sea urchins in

accordance with the European Communities (Live Bivalve Molluscs) (Health Conditions for Production and Placing on the Market) Regulations, 1996 (S.I. No. 147 of 1996).

The proposed future discharge at Blue Hill will also discharge directly to the designated shellfish water however it will be located closer to the boundary of the designated area and further away from the existing licensed mariculture activities.

A shingle sand spit located at the southern tip of Whiddy Island is designated a NHA (site code 000110). Arctic Tern, Cormorant, Shag and Herring Gull populations are recorded there.

SECTION B: GENERAL

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

B.1 Agglomeration Details

Name of Agglomeration:	BANTRY

Applicant's Details

Name and Address for Correspondence

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

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

Name*:	Cork County Council
Address:	Court House
	Skibbereen
	Co. Cork
Tel:	028 21299
Fax:	028 21995
e-mail:	

*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.

Name*:	Declan Groarke
Address:	Court House
	Skibbereen
	Co. Cork
Tel:	028 21299
Fax:	028 21995
e-mail:	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

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

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

Design, Build & Operate Contractor Details

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

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

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

Attachment included	**Yes**	**No**
	v	

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

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

Name*:	Frank O'Donovan
Address:	Old Quay Pumping Station
	Black Rock
	Bantry
	Co. Cork
Grid ref (6E, 6N)	099284E, 048631N.
Level of Treatment	Coarse screening
Primary Telephone:	027 50058
Fax:	027 51165
e-mail:	frank.odonovan@corkcoco.ie

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

Attachment B.2 should contain appropriately scaled drawings / maps (=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**
	v	

B.3 Location of Primary Discharge Point

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

Type of Discharge	Open Pipe
Unique Point Code	SW1BANT
Location	Off coast of Black Rock, Bantry
Grid ref (6E, 6N)	098665E, 048326N.

Type of Discharge	Diffuser on marine outfall
Unique Point Code	SW1BANT - Future
Location	Off coast of Blue Hill, Bantry
Grid ref (6E, 6N)	096802E, 048205N.

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

Attachment included	**Yes**	**No**
	v	

B.4 Location of Secondary Discharge Point(s)

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

Type of Discharge	Emergency overflow discharge from Old Quay pumping station
Unique Point Code	SW2BANT
Location	Inner Bantry Harbour off Harbour Road.
Grid ref (6E, 6N)	099274E, 048609N

Type of Discharge	Unauthorised discharge via open pipe to culverted river
Unique Point Code	SW3BANT
Location	Mill River
Grid ref (6E, 6N)	099733E, 048352N.

Type of Discharge	Unauthorised discharge via open pipe to culverted river
Unique Point Code	SW4BANT
Location	Alley River
Grid ref (6E, 6N)	099761E, 048432N.

Type of Discharge	Emergency overflow discharge from Reenrour pumping station
Unique Point Code	SW5BANT
Location	Cove at Reenrour (part of Inner Bantry Bay).
Grid ref (6E, 6N)	099507E, 049248N

Type of Discharge	Emergency overflow discharge from IDA pumping station (Kilnaruane)
Unique Point Code	SW6BANT
Location	Stream (discharging into Inner Bantry Bay).
Grid ref (6E, 6N)	098918E, 047734N

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

Attachment included	**Yes**	**No**
	v	

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

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

Type of Discharge	Stormwater overflow – open pipe discharging to storm system
Unique Point Code	SW7BANT
Location	Marino Street
Grid ref (6E, 6N)	099758E, 048455N.

Type of Discharge	Stormwater overflow – open pipe discharging to storm system
Unique Point Code	SW8BANT
Location	William Street
Grid ref (6E, 6N)	099626E, 048388N.

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

Attachment included	Yes	No
	v	

B.6 Planning Authority

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

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

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

has been obtained	**v**	***is being processed***	
is not yet applied for		***is not required***	

Local Authority Planning File Reference Nº:	

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

Attachment included	Yes	No
	v	

B.7 Other Authorities

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

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

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

Within the SFADCo Area	Yes	No
		v

B.7 (ii) Health Services Executive Region

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

Name:	Health Service Executive South
Address:	Coolnagarrane,
	Skibbereen
	Co. Cork
Tel:	(028) 40559
Fax:	(028) 21006
e-mail:	

B.7 (iii) Other Relevant Local 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 local authority of the said application.

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

Relevant Authority Notified	Yes	No
		v

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

Attachment included	Yes	No
		v

B.8 Notices and Advertisements

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

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

Attachment included	Yes	No
	v	

B.9 (i) Population Equivalent of Agglomeration

TABLE B.9.1 POPULATION EQUIVALENT OF AGGLOMERATION

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

Population Equivalent (current)	7002
Data Compiled (Year) - 2008	Interpolated from 2002 National Urban Waste Water Study data
Method	Census and An Post GeoDirectory

Population Equivalent	6,550
Data Compiled (Year)	2002
Method	Source: National Urban Waste Water Study – Bantry Catchment (ref. Table below)

Estimated Flow and Load by Sector

Contributing Elements		LA Data for 2002	Standard Estimates		Comment
			2002	2022	
Domestic Resident		3,040	3,040	3,192	
Resident Visitors		ND	167	167	1/3 of 500 visitors
Day Visitors		ND	333	333	2/3 of 500 visitors
Domestic Flow	m^3/d	690	420	493	2002 flow @ 138.0 l/hd/day 2022 flow @ 154.5 l/hd/day
Leisure/Tourist Flow(1)	m^3/d	42	29	29	Based on L A estimate
Unmeasured Commercial Flow	m^3/d	Incl*	67	79	Based on 16% of domestic flow - * Included in domestic
Measured Commercial Flow	m^3/d	0	0	0	
Industrial Flow	m^3/d	354	354	354	Based on L A estimate
Institutional Flow	m^3/d	254	254	266	Based on L A estimate
Infiltration	m^3/d	Incl	152	160	Estimate based on 50 l/hd/d
Imported Wastes	m^3/d	0	0	0	2022 Sludge liquors, not included in DWF.
Dry Weather Flow	m^3/d	1,340	1,276	1,381	

BOD Domestic load	kg/d	182	182	206	Assuming loading of 60g/hd/d
BOD Leisure/Tourist(1)	kg/d	11	18	18	Assuming 48 g/hd/d for overnight visitors & 30 g/hd/d for day visitors.
BOD Institutional(2)	kg/d	67	67	70	Based on L A estimate
BOD Commercial(3)	kg/d	Incl*	29	33	Estimates based on 16% of domestic flow - * Included in domestic
BOD Industrial	kg/d	97	97	97	Based on L A estimate.
Total	kg/d	357	393	424	
Population Equivalent		5,950	6,550	7,067	
BOD Imported Waste	kg/d	0	0	25	Sludge liquor.
Total BOD Load	kg/d	357	393	449	

(1) Resident and Day Visitors combined
(2) Refers to contributions additional to those from the resident Domestic population
(3) Combined Measured and Unmeasured Commercial figures

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.

A review of the Cork County Council planning database was undertaken as part of this license application. Any significant planning applications that have been granted within the last three years were identified. Permissions of significance that were recently granted are as follows:

- Construction of 12 no. holiday homes for short term letting, car parking and associated works in Seafield, Bantry.
- Construction of a new 650 pupil community college at Sheskin, Bantry.

Two sites have been zoned for Industry and Enterprise in the Dunbittern area of Bantry under the 2005 Bantry Electoral Area Local Area Plan (I-03 and I-04). A report was prepared to assess the feasibility of connecting these areas to the future collection system and waste water treatment plant at Bantry. The report concluded that the proposed new facility would cater for the development of these sites for industry/enterprise. A number of planning permissions have been granted by Cork County council in recent years for the development of theses areas. Some of the industries granted permission includes a steel manufacturing/fabrication facility, industrial warehouses and commercial units and a Waste recycling facility.

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
	v	

B.10 Capital Investment Programme

A programme of works has been prioritised for the developments of infrastructure to collect, convey, treat and discharge waste water from Bantry.
The scheme involves an upgrade to the collection and pumping systems and the provision of a new waste water treatment plant.
The upgrade includes modifications to the existing pump station, surface water sewers and storm overflow chambers and the construction of a new waste water treatment facility, rising main, outfall and diffuser. The proposed waste water treatment plant at Blue Hill with a designed population equivalent of 6,000 will treat the sewerage to 20/30 standard prior to discharge to Bantry Bay.

The Bantry Sewerage Scheme upgrade is included in the Water Services Investment Programme 2007 – 2009 and a capital investment of €7,148,000 is proposed for the scheme.

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.

A programme of works is awaited from the Civil Contractor. Works are estimated to be completed in 2009.

Attachment included	Yes	No
	v	

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.

No Section 63 notices have been issued by the Agency

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

Attachment included	**Yes**	**No**
		v

B.12 Foreshore Act Licences.

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

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

Attachment included	**Yes**	**No**
	v	

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.

The existing sewerage scheme servicing the agglomeration of Bantry consists of a combined storm and foul collection network which flows by gravity to the main pumping station located at Old Quay. The effluent treatment provided at the pumping stations is coarse screening only using a rake screen. From here the effluent is pumped via a 250mm diameter rising main to Black Rock where it is discharged approximately 60m from the shoreline at a rate of 48 l/sec. A 450mm diameter emergency overflow discharges from the pumping station to the inner harbour in the event that the load to the pump station is in excess of 6 DWF (i.e. when the capacity of the pumping station of 94.6 l/s is exceeded).

A second pump station which services approximately 50 houses is located at Reenrour to the north of Bantry Town. This pump station discharges into the collection system at a manhole near the entrance to of St. Cainirs Place. Effluent moves from here by gravity to the pumping station at Old Quay. A third pump station is located in Kilnaruane. This station accepts combined flows from the IDA to the south of Bantry Town. The station pumps effluent to a manhole located on Rope Walk, at the end of the Bantry Town collection system. From here the effluent is discharged through the primary discharge at Black Rock. There is an emergency overflow from this pump station which discharges to a local stream. This overflow only operates if the pumps fail.

Two existing storm overflow pipes discharge from William Street and Marino Street Combined Storm Overflows (CSOs) to 350mm diameter storm sewers which also collect storm water from Wolfe Tone Square and ultimately discharge to the Inner Harbour. The CSO at Marino Street operates whereby the flows to the chamber exceed 9DWF (50.4 l/s). The storm overflow at William Street discharges whereby flows to the chamber exceed 6DWF.

The only means of treatment currently provided to the effluent from the collection system before discharge to Bantry Harbour is coarse screening at the Old Quay pump house. Biological or chemical treatment of the wastewater is not performed.

It is proposed that the existing sewerage scheme for Bantry town be upgraded in order to cater for the existing and future population of the Town. The upgrade work is to include modifications to the existing pump station at Old Quay, surface water sewers and storm overflow chambers, and the construction of a new wastewater treatment facility, rising main, outfall and diffuser.

The scheme is designed to cater for a design PE of 6,000. The existing rising main from the Old Quay pumping station will be maintained in order that excess flows to the new wastewater treatment plant can be discharged to the harbour via the existing outfall at Black Rock during storm events. The pump house itself is to be maintained and upgraded and new pumps will be installed to pump up to 6 DWF to the new treatment works via a new 250mm rising main. The design DWF for the proposed system is

15.76 l/s and the maximum design flow to the pumphouse is 163.8 l/s, or approximately 10.4 DWF. The coarse screen is to be replaced by open-channel disintegrator units upstream of the sump.

The new wastewater treatment facility is to be located at Blue Hill, Bantry. The Works will include preliminary and secondary treatment. Preliminary treatment will be in the form of mechanically back-raked screens followed by a vortex-type grit-removal system. Up to 6 DWF will be pumped directly to the preliminary treatment works. 3 DWF will be overflowed downstream of the preliminary treatment works and discharged to a storm-water settlement tank. Following the storm event the contents of the storm tank will be redirected through the Works. Secondary treatment will be in the form of carrousel type extended aeration incorporating nitrification/denitrification and phosphate precipitation. Waste sludge shall be passed through a picket fence thickener and a filter press before being disposed of off site. Effluent from the Works will discharge to the new marine outfall via a proposed tidal holding tank flowing which it will be discharged via a diffuser.

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.

Two existing storm overflow pipes discharge from William Street and Marino Street Combined Storm Overflows (CSOs) into the Alley and Mill Rivers (Ref. Map 16 and Map 17). An assessment was carried out as part of the Preliminary Report for the upgrade of the Bantry Sewerage Scheme in order to assess the potential for using the existing CSOs as part of the proposed new sewerage scheme. It was determined that the two existing storm overflow chambers at Marino Street and William Street require upgrading in order to allow them to conform to new flow regimes which would ensure that the BOD of the receiving waters would at no time be raised by more that 1mg/l outside the mixing zone. Modifications are to be made to the overflow weirs and throttle pipes of both chambers.

Additionally in order to avoid flooding of Wolfe Tone Square during periods of heavy rainfall coinciding with high tide conditions, large quantities of surface run-off will be directed to the old Quay pump station via two proposed overflow chambers on the existing storm sewers serving Wolfe Tone Square. Actuated penstocks at the manholes will prevent the flows of tidal waters from entering the system. It is proposed to provide pumping capacity to discharge this storm water directly to the adjacent harbour via the existing 250mm dia. rising main and a proposed 400mm dia. rising main.

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.

There are three pumping stations operating within the existing Bantry Sewerage Scheme as follows:

1. The primary pump station at Old Quay (ref. Map 2 and Map3) discharges to the inner Harbour at Black Rock (098665E, 048326N);
    - Two existing duty/standby foul pumps pump effluent via a 250mm diameter rising main to the outfall location in the Inner Harbour at Black Rock at a maximum rate of 48 l/sec. It is proposed that the pump station be upgraded as part of the proposed new treatment works. 2 No. new duty/standby variable speed drive (VSD) foul pumps are to be installed to feed flows to the new wastewater treatment plant via a new 250mm diameter rising main. These will cater for flows of up to 6 DWF (8166 m³/day). Flows in excess of 6 DWF are to be catered for by two new VSD storm pumps which will discharge to the harbour at Black Rock via the existing rising main. Whereby these pumps are beaten, two additional storm pumps with a capacity of 326l/s are also to be installed to cater for the storm water flows that are to be diverted to the pump station from Wolfe Tone Square.
    - The existing 450mm diameter emergency overflow at the Old Quay pump station discharges from to the inner harbour whereby the flows to the pump station are in excess of 6 DWF or whereby there is pump failure. It is reported to operate infrequently (approximately once per year).

2. The Reenrour pump station discharges into the collection system at a manhole near the entrance to of St. Cainirs Place and effluent subsequently flows to the Old Quay pumping station via the existing collection system;
    - The pump station has 1 No. 7.5kW pump which operates at a rate of 10.2m³/hr to facilitate 12m head. The station if fed by a combined system which serves approximately 50 dwellings in the area.
    - In the event of pump failure the effluent is discharged to a nearby drain via an emergency overflow (E099507, N049248) which flows to the nearby Cove. This overflow only comes into operation whereby the pump fails.

3. The IDA pump station at Kilnaruane discharges to a manhole located on Rope Walk, at the end of the Bantry Town collection system and subsequently flows to the inner harbour at Black Rock via the Old Quay rising main. The pump station only services the IDA.
    - The pump station has 2 No. 2.25kW submersible sewage pumps, with a pump frequency of 50Hz.
    - An emergency overflow operates only in the event of pump failure and discharges to a local stream (E098918, N047734).

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

Attachment included	Yes	No
		v

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.

The existing primary discharge from the Old Quay pumping station is via a 250mm diameter open ended pipe at Black Rock (E098665, N048326). This outfall is to be retained following the upgrade of the existing sewerage scheme in order to cater for flows from the pump station in excess of 6 DWF. The future primary discharge is to be located approximately 250 metres from shore at Blue Hill, in approximately 6.5 metres of water (E098660, N048356). The top of the diffusers will be no more than 1 metre from the bay bed (Ref. Map 15) in order to allow a water depth of 5.5m for the passage of vessels.

A 450mm diameter emergency overflow (E099274, N048609) discharges to the inner harbour whereby the flow to the Old Quay pump station is in excess of 6 DWF. A second pump emergency discharges from the pumping station at Reenrour. This overflow only operates in the event of pump failure the effluent and the effluent is discharged to a nearby drain (E099507 N049248) which then flows to the nearby Cove. A third emergency overflow operates from the IDA pumping station and discharges to a local stream (E098918, N047734). Again, this overflow only operates if the pumps fail.

The Local Authority is aware of a number of rogue discharges to the culverted sections of the Alley and Mill rivers (approximate locations are E099733, N048352 and E099761, N048432). These discharges warrant further investigation.

Two existing storm overflow pipes discharge from William Street and Marino Street Combined Storm Overflows (CSOs) to 350mm diameter storm sewers which also collect storm water from Wolfe Tone Square and ultimately discharge to the Inner Harbour. The CSO at Marino Street (E099758, N048455) operates whereby the flows to the chamber exceed 9DWF (50.4 l/s). The storm overflow at William Street (E099626, N048388) discharges whereby flows to the chamber exceed 6DWF.

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

Attachment included	Yes	No
	v	

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/. ***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/. 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. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, E.3 and F.2.

SECTION E: MONITORING

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

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

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

Provide an estimation of the quantity of waste water likely to be emitted in relation to all storm water overflows within the agglomeration applied for. This information should be included in Table E.1(ii) via the following web based link: 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. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and F.2.

E.4 Sampling Data

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

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

Attachment E.4 should contain any supporting information.

Attachment included	Yes	No

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.**

Specific details of the emission impacts on the receiving environment are provided in Section 3 of the EIS *'Cork County Council Environmental Impact Statement for Bantry Sewerage Scheme, Bantry, Co. Cork'.*

- **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/. 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.**

Tables F.1(i)(a) & (b) are included in the application form.

- **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.**

Tables F.1(ii)(a) & (b) are included in the application form.

- **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.

There are no groundwater emissions from the existing or proposed discharges to which this licence application pertains.

- **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.**

Bantry town is primarily residential with commercial and industrial facilities. The primary industries in Bantry include mariculture, port related industry and tourism. The town has a number of large institutions including a hospital and primary and secondary schools. The origin of the effluent therefore comprises waste water generated from the following sectors:

Domestic/Residential
Institutional
Holiday/Leisure
Commercial
Industrial

Additionally a number of small commercial activities discharge effluent directly to the Inner Bay under section 4 licenses and there are also some unauthorised effluent discharges from domestic properties into the culverted Mill River which flows into the Bay.

Effluent from the hospital, which may potentially contain viral contamination, is currently discharged directly to sewer without any pre-treatment. Samples of hospital wastewater and samples of wastewater at the pump station were taken for analysis as part of the environmental impact assessment undertaken for the scheme in 1992. Human enteric viruses were at concentrations below the detection limit in all of the samples taken. However, as a safeguard against the potential source of viral contamination, as part of the future sewerage scheme development, it is proposed to provide a separate drainage system for the 2 acute intensive care wards in the hospital. Wastewater from these wards will discharge to a new septic tank and soakaway system

Inner and Outer Bantry Bay are classified respectively under the EU Water Framework Directive (2000/60/EC) as transitional and coastal waters. The Environmental Protection Agency (EPA) have historically carried out some water quality sampling in the bay itself and an Bord Iascaigh Mhara (BIM) carry out regular sampling in the bay (BIM Monitoring data from the period 2003 – 2007 and EPA historical monitoring data is contained in Attachment F1).

A number of rivers discharge into the bay. Of relevance to this license application are the Alley River and the Mill River both of which pass through Bantry Town. The Alley River discharges into the Mill River before finally discharging into Bantry Bay. These rivers are not subject to biological or physico-chemical monitoring under the Water Framework Directive.

Cork County Council undertook sampling of the transitional waters of Bantry Bay as part of this license application. A once –off grab sample was taken just outside Wolfe Tone Square where the

Mill River culvert enters the Bay (SW3dBANT – Reference Map 12 for location). The BOD and MRP concentrations of the sample indicated that there may be some organic input to the water. This may be from the rogue discharges to the Mill and alley Rivers. However as this was a one-off sample, further monitoring would be required to determine the level of organic input. A sample of effluent was also taken at the last manhole before discharge into the pump station at Old Quay (SW1BANT).

The Department of the Environment Heritage & Local Government published the Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008 for consultation on 5th September 2008. These draft Regulations are a follow up to the initial consultation document published by the Environmental Protection Agency (EPA) in 2007. The draft Regulations provides quality standards for the classification of surface waters in accordance with the requirements of the Water Framework Directive. The document sets out standards to be achieved for thermal, oxygen and nutrient conditions for transitional waters in order that the overall aim of 'Good Status' is achieved. A comparison between the results of analysis of the sample taken at SW3dBANT and the draft quality standards was undertaken and the following was noted:

- BOD:- The sample taken at SW3dBANT had a Biochemical Oxygen Demand (BOD) concentration of 6mg/l. This is in excess of the ecological quality standard (EQS) set out in the document of <4mg/l. However it should be noted that the EQS value a 95%ile and therefore a greater number of samples would be required at this site in order to make a more accurate determination of status.
- DO:- The EQS value set for Dissolved Oxygen (DO) is dependant on salinity. Neither DO nor salinity was monitored for at the time of taking the sample.
- Temperature:- Temperature was not taken at the time of sampling.
- DIN:- An ESQ value for transitional waters has not been set for Dissolved Inorganic Nitrogen (DIN) in the draft Regulations. An EQS has been set for coastal waters however as the EQS is salinity dependant it would not be appropriate to use the coastal EQS values for the sample taken at SW3dBANT as there is freshwater influence at this location. DIN is the sum of the concentrations of nitrate, nitrite and ammonia. The concentration of ammonia in the sample taken at SW3dBANT was 1.8mg/l.
- MRP:- The EQS for orthophosphate is also salinity dependant (<0.040 mg/l and <0.060mg/l). The sample taken at SW3dBANT had a MRP concentration of 0.26 mg/l which is in excess of the EQS value. It should be noted that the EQS is a median value and that further monitoring at SW3dBANT would therefore be required in order to make a more accurate comparison.

Inner Bantry Bay has been characterised as 'At Risk' in accordance with the Water Framework Directive Article 5 characterisation. The primary pressures identified as causing the waterbody to be at risk of failing to achieve 'Good Status' are morphological pressures however section 4 discharges have also been identified as probably causing risk (Ref. Attachment F1 for the Waterbody Report).

The existing primary discharge from the Old Quay pumping station discharges into transitional waters off the coast of Black Rock (098665E, 048326N) (this includes foul flows from Reenrour pumping station and from the IDA pumping station). The primary discharge from the proposed Bantry wastewater treatment plant will also be to transitional waters off the coast of Blue Hill (096802E, 048205N). Bantry Bay is not designated as sensitive water under the Urban Wastewater Treatment Regulations, 2000 therefore there is no statutory requirement to provide tertiary treatment at the proposed new facility.

The traditional bathing areas in and around Bantry Bay are not designated in current Bathing Water Regulations. However it should be noted that it is a specific recommendation of the Water Quality Management Plan for Bantry Bay (1988) that all bathing waters should conform to the National limit values. Under the new 2008 Regulations Intestinal enterococci and Escherichia coli are to be monitored for.

Inner Bantry Bay is designated as a shellfish water under the Quality of Shellfish Waters Regulations 2006 and therefore the water quality standards set out by those Regulations must be met. Oyster and mussel cultivation are the primary aquaculture activities within the bay (Ref. Map in Attachment F1).

The shellfish growing areas at Bantry Bay are sampled annually in accordance with the monitoring requirements of Council Directive 79/493/EEC, on the quality required of shellfish waters, and by the EC Hygiene Regulations 'laying down specific rules for food of animal origin' (Nos. 852/853/854 of 2004). The sampling is carried out by Bord Iascaigh Mhara (BIM) on behalf of the Marine Institute (MI) at a designated sampling location within the Inner Bay (098110E, 049380N) located close to the main aquaculture licensed activities.

The existing wastewater discharge at Black Rock is entering the bay untreated. The effluent from this discharge was sampled for the purposes of the EIS undertaken in 1992 and high concentrations of faecal coliforms were noted. There are active mussel, oyster and shrimp production areas within 2 km of the existing sewerage outfall. The BIM data shows faecal coliform concentrations in the receiving waters to be in the ranges of 1 and 310 cfu/100ml with typical values being in the region of 9 cfu/100ml. The Quality of Shellfish Waters Regulations, 2006 stipulates a Guide value for faecal coliforms of =300 MPN/100mls in the shellfish flesh or intervalvular liquid, the BIM data for 2003 – 2007 give values in the range of 1 and 3,500 cfu/100ml.

The proposed future marine outfall is to be located off the coast of Blue Hill. Pathogenic dispersion modelling was undertaken in 1990 as part of a hydrographic study undertaken for the proposed Bantry Sewage Scheme. The results of this modelling show worst-case scenario concentrations of 10.8 fcu/100 ml in the active shellfish-cultivation zone in the Bay.

The BIM data showed the results for all other parameters to be below the mandatory and guide values as set out in the Shellfish Regulations with the exception of the DO sample which was on one occasion only in breech of the mandatory value set out. The EPA monitoring data, 2000 and 2003, also showed the relevant parameters to be in compliance with the Regulations. The EPA monitor at a number of ECWM (estuarine and coastal monitoring sites) within Bantry Bay. Of particular relevance to this license are the monitoring locations at Bantry Pier, Black Rock, the Sailing Club and at Beach. A summary of the results is provided below:

Oxygenation Conditions:
None of the samples taken within the Bay are in breech of the draft EQS (Environmental Quality Standard) values for Dissolved Oxygen (DO) in Transitional Waters of >70% and >80% (depending on salinity). The lowest DO concentration (83%) was recorded at Bantry Pier (9.45am – May, 2000) from a sample taken from the surface of the water. This sampling site is influenced by fresh water flows from the culverted Mill River. It should be noted that the BOD (Biochemical Oxygen Demand) recorded from the same sample taken at this site was 4 mg/l, which is equal the EQS for BOD of <4mg/l. These results indicate an organic input, which is likely to be from the

domestic effluent entering the culverted river from the rogue discharges and/or from the emergency overflow from Old Quay pump station.

Nutrient Conditions:
The DIN (Dissolved Inorganic Nitrogen) value of the sample taken at Bantry Pier (9.45am – May, 2000) contained a DIN concentration of 0.61mg/l which is higher than that recorded in other areas of the bay. This elevated DIN may be attributed to the freshwater influence at this sampling location in the Bay. The phosphorous concentration at this sampling point (60µg/l) was also noticeably higher than that of other locations within the Bay.

A water quality assessment of the bay was undertaken in 1990 as part of the Water Quality Management Plan for Bantry Bay (ref. Attachment F1). The results of the analysis generally showed that the water was unpolluted however it should be noted that there was evidence of contamination of certain areas of the Bay by domestic effluent (high bacterial counts). The model predicted that, following the proposed treated effluent discharge, coliform levels within Bantry Bay would be within the standards set for shellfish waters.

A Benthic Survey of the Inner Bantry Bay (A, S. Neiland & T. McMahon, 1999) noted that the 'area appears to be in an intermediate phase between slight environmental stress and broadscale pollution'. This observation was based on a biological assessment of the benthic faunal community within a number of sample locations within the Bay. It was noted that this may be attributed to inputs of organic matter to the Bay from domestic and industrial waste discharges and also from natural sources from mussel production.

Cork County Council undertook a survey in 2004 to determine the levels of Tributyltin (TBT) pollution in a number of harbours along the Cork coast. Included in this study was Bantry Bay. The study looked at imposex levels of the Dogwhelk mollusc in the Bay as an indicator of TBT pollution. The study indicated that there is no occurrence of reproductive impairment as a result of TBT pollution in the Harbour.

In order to assess the trophic status of Ireland's estuaries and bays the Assessment of Trophic Status of Estuaries and Bays in Ireland (ATSEBI) system was established. Based on criteria levels of nutrient enrichment (Dissolved Inorganic Nitrogen and Molybdate Reactive Phosphorous), chlorophyll levels and percentage saturation of dissolved oxygen DO, the trophic status of the water can be classified into eutrophic, potentially eutrophic, intermediate and unpolluted. Both Inner and outer Bantry bay were classified as intermediate in the EPA's Water quality in Ireland Report, 2001-2003. The Bay was not assessed for the latest 2006 report. Intermediate Status waterbodies are those which do not fall into the Eutrophic or Potentially Eutrophic classes but in which breaches one or two of the criteria occur.

The Cusroe, Whiddy Island NHA (site code 000110) is located 3km west of Bantry, in Bantry Bay. The designated area is located at the south-west of Whiddy Island and comprises a gravel/shingle spit which plays host to a colony of Arctic Tern, an Annex I species in the EU Birds Directive. Cormorant, Shag and Herring Gull populations are also recorded on the island. The proposed future primary discharge is to be located off the coast of Blue Hill which is just outside the designated NHA. The outfall pipe is to be designed to maximise dissipation and dispersion of the effluent. The dispersion modelling undertaken in 1990 as part of the hydrographic survey undertaken for the proposed new sewerage scheme show that the predicted BOD concentrations in the receiving waters are well below the EQS value of 5mg/l the maximum predicted BOD concentration of 0.0063mg/l was recorded at the proposed site of effluent

discharge at the Narrows. Similarly the model predicted the highest pathogen concentrations to be at the point of discharge. Highest predicted pathogen concentrations were 3,750 MPN/l

It was determined in the EIS that localised impacts of the discharge would be minimal and would be compensated for by the widespread improvement in water quality and habitat quality in the harbour following the operation of the proposed new wastewater treatment plant at Blue Hill.

- **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.**

Cork County Council undertook a survey in 2004 to determine the levels of Tributyltin (TBT) pollution in a number of harbours along the Cork coast. Included in this study was Bantry Bay. The study looked at imposex levels of the Dogwhelk mollusc in the Bay as an indicator of TBT pollution. The study indicated that there is no occurrence of reproductive impairment as a result of TBT pollution in the Harbour.

- **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.**

There are no abstraction points downstream of any discharge points to which this licence pertains.

- **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[1] 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[2];

[1]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)

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

The Cusroe, Whiddy Island NHA (site code 000110) is located 3km west of Bantry, in Bantry Bay. The proposed future primary discharge is to be located off the coast of Blue Hill which is just outside the designated NHA. The dispersion modelling undertaken in 1990 as part of the hydrographic survey undertaken for the proposed new sewerage scheme show that the predicted a negligible impact on the water quality in the area. The site synopsis is detailed below:

SITE SYNOPSIS

SITE NAME: CUSROE, WHIDDY ISLAND

SITE CODE: 000110

This spit consists of an accreting, gravel site on the south-east part of Whiddy Island, 3km west of Bantry in Bantry Bay, Cork.

A colony of Arctic Terns has been known from here since 1834, the fortunes of which have fluctuated over the years. In 1984, 56 pairs were present, this constitution 28% of the Cork population at that time, and the second largest Arctic Tern colony in the regin. In 1986 the colony had reached levels of national importance, with 120 pairs present, but in 1993 only 7 or 8 pairs occurred, with larger numbers then being found on Sheelane Island, (another proposed NHA) some 6km to the west.

In 1986 Whiddy Island was recorded as having 10 breeding pairs of Cormorants, 10 pairs of Shags and 65 pairs of Herring Gulls in addition to the Arctic Terns, although these figures would apply to Whiddy Island as a whole and not just to the shingle spit. The Arctic Tern is listed on Annex I of the EU Birds Directive, and so this proposed NHA makes an important contribution to the species' conservation, even if numbers are at times quite low.

- **Describe, where appropriate, measures for minimising pollution over long distances or in the territory of other states.**

Not Applicable

- **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.**

A marine survey was undertaken in 1990 and a mathematical model was used to determine the impact on receiving water quality of discharging effluent (following secondary treatment) from the proposed waste water treatment plant at Blue Hill via the new marine outfall at the Narrows (approximately two miles from Bantry town).

Attachment included	Yes	No
	v	

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

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

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

Attachment F.2 should contain any supporting information.

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, and
- Bathing Water Directive 76/160/EEC.

1. Dangerous Substances Directive 2006/11/EC – Cork County Council has implemented a monitoring programme to ensure compliance with the Directive..

2. Water Framework Directive 2000/60/EC – The objectives of the Water Framework Directive (WFD) are to protect all high status waters, prevent further deterioration of all waters and to restore degraded surface and ground waters to good status by 2015. Cork County Council through the Water Services Investment Programme propose to construct a new wastewater treatment facility at Bantry to provide secondary treatment to the effluent prior to discharge to the bay, thus improving water quality in Bantry Bay. Daily monitoring of inlet and outlet flows will be scheduled at the WWTP and a monitoring programme will be implemented to monitor for dangerous substances in the receiving waters. Additionally the rogue discharges to the culverted river are to be identified by the Local Authority and removed.

3. Birds Directive 79/409/EEC – The directive aims to conserve and manage populations of wild birds throughout Europe by part through the designation of Special Protection Areas (SPA) for birds and their habitats. There are no designated SPAs within the Bantry Bay area however it should be noted that the south-eastern corner of Whiddy Island is designated a pNHA under the Wildlife Acts (site code 000110) due to the presence of a colony of Arctic Tern, an Annex I species in the EU Birds Directive. The hydrographical survey undertaken in 1990 shows, through dispersion modelling, that the proposed future effluent discharge will have a negligible impact on the surrounding environment. The existing discharge is at a sufficient distance from the pNHA in order that it does not impact upon the ecology of the area.

4. Groundwater Directives 80/68/EEC and 2006/118/EC – Not Applicable as there are no emissions to groundwater.

5. Drinking Water Directives – Not Applicable as there are no abstraction points downstream of any discharge points to which this licence pertains.

6. Urban Waste Water Treatment Directive 91/271/EEC – The Bantry sewerage scheme has been identified for upgrade under the Water Services Investment Programme 2007 – 2009 and a capital investment of €7,148,000 is proposed for the scheme. The new facility will be designed to provide secondary treatment to the effluent. The receiving waters are not designated as sensitive water and tertiary treatment is therefore not a statutory requirement.

7. Habitats Directive 92/43/EEC – There are no Special Areas of Conservation in proximity to the discharge locations.

8. Environmental Liabilities Directive 2004/35/EC - Regard to the EPA Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision was made during completion of this application and it is considered that the new WWTP at Blue Hill, Bantry will enhance compliance with this Directive.

9. Bathing Water Directive 76/160/EEC – There are no designated bathing waters in the proximity of the existing or proposed discharges to Bantry Bay. It should be noted however that it is a specific recommendation of the Water Quality Management Plan for Bantry Bay (1988) that all bathing waters should conform to the National limit values. The treated discharge from the proposed new wastewater treatment plant at Blue Hill will help to ensure that the limit values are met.

10. Shellfish Waters Directive (79/923/EEC) - Inner Bantry Bay is designated as a shellfish water under the Quality of Shellfish Waters Regulations 2006 and therefore the water quality standards set out by those Regulations must be met. The shellfish growing areas at Bantry Bay are sampled annually in accordance with the monitoring requirements of the Directive. The sampling is carried out by Bord Iascaigh Mhara (BIM) on behalf of the Marine Institute (MI) at a designated sampling location within the Inner Bay (098110E, 049380N) located close to the main aquaculture licensed activities. This monitoring will continue into the future.

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

Attachment included	Yes	No
		v

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

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

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

Attachment included	Yes	No
		v

The Phosphorus Regulations (S.I. No. 258 of 1998) do not apply in this case as the primary discharge to which this license application pertains is a discharge to transitional/coastal waters. It should be noted however that a phosphate removal system is to be constructed as part of the proposed wastewater treatment plant Works for the purposes of protecting the designated shellfish waters.

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
		v

Considerable capital investment is proposed for Bantry Town under the Water Services Investment Programme. Investment of €7,148,000 is proposed for the development of a new wastewater treatment plant and associated collection system for Bantry Town. The newly constructed sewage scheme is expected to provide adequate treatment for the existing population of the area and has been designed to meet the future needs.

Mott MacDonald Pettit prepared a report in 2007 on options to service two sites zoned for Industry and Enterprise under the 2005 Bantry Electoral Area Local Area Plan (I-03 and I-04) in the Dunbittern area of Bantry. The report concluded that the proposed new facility would cater for the development of these sites and options were available to either connect directly to the proposed new waste water treatment plan or to connect to the sewer. A number of planning permissions have been granted by Cork County council in recent years for the development of theses areas. Some of the industries granted permission includes a steel manufacturing/fabrication facility, industrial warehouses and commercial units and a Waste recycling facility.

The future wastewater treatment plant is to comprise of the following:

- Preliminary treatment comprising of fine screening (6mm) and grit removal for flows up to 94.6 l/s, with the screenings and grit to be washed and dewatered prior to disposal off site.
- Storm water separation facilities comprising of a storm overflow and settlement tank (for flows in excess of 47.3 l/s) and storm water return pumping.
- Primary settlement in two parallel tanks.
- Secondary treatment in two oxidation ditches operating in parallel and fitted with surface aerators. This is designed as an extended aeration system to provide nitrification and denitrification.
- Secondary settlement in two radial flow tanks, each equipped with sludge return pumping systems serving the oxidation ditches.
- Primary sludge pumping, thickening and storage facilities.
- Secondary sludge thickening in a picket fence thickener.

- Secondary sludge dewatering in a belt press.
- Sludge storage facilities.
- Phosphate removal system comprising of a ferric dosing system.
- Tidal holding tank and associated controls to ensure treated effluent is discharged only under specific tidal conditions.

Once operational, the new waste water treatment plant will be required to monitor effluent quality on a monthly basis under the Urban Waste Water Treatment Regulations, 2001, S.I. No. 254 of 2001. Monitoring results will be issued to the EPA on an annual basis.

A monitoring programme has been developed for the purposes of this licence application (ref. Attachment E2). It is proposed that water quality and effluent monitoring be undertaken on a quarterly basis for the purposes of identifying the relevant dangerous substances present in the discharge for the year 2008. A subsequent monitoring programme may be proposed on review of the results of the initial programme.

An appropriate monitoring programme will be devised prior to operating the new waste water treatment plant in order to comply with the Waste Water Discharge (Authorisation) Regulations, 2007, S.I. No. 684 of 2007. It is envisaged that monitoring of the current system will cease following commissioning of the new Works except in the event that the emergency overflow at Old Quay pumping station comes into operation on a more frequent basis than anticipated.

The foreshore license (Ref. Attachment B.12) specifies twice monthly sampling of the effluent from the wastewater treatment plant immediately downstream from the plant and immediately prior to discharge. These samples shall be tested for 5-day B.O.D. and for suspended solids concentration. A report on compliance with the required standards is to be sent to the Department of Communications, Marine and Natural Resources.

Additional to the monitoring required under the conditions of this license application, monitoring will continue to be undertaken by BIM for the purposes of classification of the areas designated for shellfish production. It is also likely to be a requirement that Bantry Bay be monitored for the purposes of demonstrating compliance with the requirements of the Water Framework Directive.

Any future deterioration in water quality may be identified under these monitoring programmes. In the event that there is deterioration in water quality, investigative monitoring may be undertaken as part of the Water Framework Directive to identify the source of pollution. Where pollution is attributed to the sewage scheme, an appropriate programme of measures will be developed to address the problem.

The Works are to be newly constructed to meet with the current discharge standard. However it is likely to be condition of the Contract that the Contractor undertakes intermittent legislation reviews in order to identify any additional standards that need to be met by the Works. It may be required that the treatment plant be designed to accommodate future upgrading needs that may be identified as part of this legislation review e.g. to achieve Total Nitrogen and/or Total Phosphorus standards to accommodate any future designations of the receiving water bodies.

Additionally, the domestic discharges to the Mill and Alley river culvers will be investigated and diverted appropriately.

G.4 Storm Water Overflow

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

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

Attachment included	Yes	No
		v

The two existing storm overflow chambers at Marino Street and William Street are to be upgraded as part of the development of the new sewerage scheme for Bantry Town. Modifications are to be made to the overflow weirs and throttle pipes of both chambers in order to allow them to conform to new flow regimes which would ensure that the BOD of the receiving waters would at no time be raised by more that 1mg/l outside the mixing zone. An assessment of the impact of the modified CSOs was undertaken in the design of the sewerage scheme and this indicated a maximum increase in BOD of 0.95 mg/l in the Alley River and 0.39 mg/l in the Mill River as a result.

Additionally the storm water discharges from Wolfe Tone Square are to be redirected to the pumping station via two overflow manholes as part of the proposed upgrading works. Storm will then be pumped directly to the Inner Harbour.

The storm water overflows designed to meet the criteria set out in the *Procedures and Criteria in relation to Storm Water Overflows* document (Department of the Environment, 1995).

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

SECTION I: JOINT DECLARATION

Joint Declaration [Note1]

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

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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.

ATTACHMENTS TABLE OF CONTENTS:

ATTACHMENT	MAP Nr.	TITLE
B.1	MAP 1	BANTRY AGGLOMERATION
B.2	MAP 2	OLD QUAY PUMPING STATION SITE LOCATION PLAN
B.2	MAP 3	OLD QUAY PUMPING STATION SITE LAYOUT PLAN
B.2	MAP 4	PROPOSED BANTRY WWTP SITE LOCATION PLAN
B.2	MAP 5	PROPOSED BANTRY WWTP SITE LAYOUT PLAN
B.3	MAP 6	PRIMARY DISCHARGE LOCATION (SW1BANT)
B.3	MAP 7	FUTURE PRIMARY DISCHARGE LOCATION (SW1-FUTURE)
B.4	MAP 8	SECONDARY DISCHARGE LOCATION (SW2BANT)
B.4	MAP 9	SECONDARY DISCHARGE LOCATIONS (SW3BANT & SW4BANT)
B.4	MAP 10	SECONDARY DISCHARGE LOCATIONS (SW5BANT)
B.4	MAP 11	SECONDARY DISCHARGE LOCATIONS (SW6BANT)
B.4	MAP 12	DISCHARGE LOCATIONS OVERVIEW
B.5	MAP 13	STORMWATER OVERFLOW LOCATIONS (SW7BANT & SW8BANT)
B.6	TEXT	PART 8 PLANNING
B.8	MAP 14	LOCATION OF SITE NOTICE
B.8	TEXT	NEWSPAPER APPLICATION & SITE NOTICE
B.10	TEXT	WSIP 2007-2009
B.12	TEXT	FORESHORE LICENSE
C.2	MAP 15	PROPOSED PRIMARY OUTFALL DETAIL
C.2	MAP 16	STORM WATER OVERFLOW - WILLIAM STREET
C.2	MAP 17	STORM WATER OVERFLOW - MARINO STREET
D.2	TEXT	TABULAR DATA ON DISCHARGE POINTS
E.3	TEXT	TABULAR DATA ON MONITORING &DISCHARGE POINTS
F.1	TEXT	MISCELANEOUS: Inner and Outer Bantry Bay Waterbody Report; Map Designated Shellfish Area – Bantry; Water Quality Data – Bantry Bay; Water Quality Management Plan for Bantry Bay.
EIS	TEXT	ENVIRONMENTAL IMPACT STATEMENT: EIS NTS.pdf EIS Section 1.pdf EIS Section 2.pdf EIS Section 3.pdf EIS Section 4.pdf