Waste Water Discharge Licence Application Form

EPA Ref. Nº: *(Office use only)*	

Environmental Protection Agency
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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.

CONTENTS

ANNEX 1: TABLES / ATTACHMENTS

ANNEX 2: CHECKLIST

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

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

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

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

A description of:

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

Supporting information should form **Attachment Nº A.1**

SECTION A: NON-TECHNICAL SUMMARY

The Waste Water Works and the Activities Carried Out Therein

Cloughduv is a small village approximately 17 miles from Cork City and 8.5 miles from Macroom. It is located to the south of the N22 national primary road.

The waste water in Cloughduv village is collected in a separate foul sewerage collection system. The waste water flows by gravity to the waste water treatment plant. There is one pumping station located within the village. The waste water enters the WWTP via a 225mm gravity sewer.

The WWTP in Cloughduv is currently designed for a population equivalent of 500. The WWTP was commissioned approximately 7 to 8 years ago. Rotating Biological Contactors (RBC) are the process employed at Cloughduv WWTP. The treatment process incorporates the following:

- Inlet works.
- Primary Settlement – I Nr BMS BL 1500 litre settlement tank complete with lamella plates.
- Secondary Treatment – 2 Nr BMS B3500 Aerator units (Rotating Biological Contactor units).
- Final Settlement – 2 Nr BMS H3500P humus tanks complete with sludge return pumps and covers.
- Outlet works – final effluent pumped to the Brouen River
- Control building – the control building is a metal bulding and the control kiosk has a dial out facility.

When effluent enters the WWTP it enters the primary settlement tank under gravity from the inlet manhole. Flow then passes through to the two RBCs which are set up to run in parallel. From there the flow passes into the clarifiers (2No) which also run in parallel before the treated effluent enters the outfall pump sump. There is one submersible pump in the outfall pump sump and this raises the WWTP effluent approximately 5m to a manhole on the public road just outside the site boundary. The treated effluent flows from the header manhole by gravity from that point to the Brouen River, which is a tributary of the Bride River, which in turn is a tributary of the River Lee.

Currently the WWTP is receiving flows of approximately 89m³/day, based on a daily demand of 225l/head/day and a PE of 396.

A new WWTP is currently being constructed to cater for a PE of 1500 with waste water discharges of approximately 338m³/day, based on a daily demand of 225l/head/day. The discharge location from the new plant will be to the Bride River. Additional land has been acquired for the construction of the new treatment plant, this land adjoins the existing site of the treatment plant. The new site has an area of 5,170m² (1.28 acres) which includes the existing site. The existing WWTP will be decommissioned once the new plant is commissioned.

The new WWTP will include the following:

- New inlet pumping station
- New inlet screening
- New pumping station and storm holding facility
- New aeration tank
- New clarifier and RAS/WAS pumps

- Provision of a ferric storage tank and dosing system
- New Tertiary treatment using a filtration system
- New Sludge pumping and sludge holding tank
- New Final effluent pumping station and outfall to the Bride River
- Miscellaneous Mechanical and Electrical Works
- New Control / Staff Facilities Building
- New Site Roads and Footpaths
- New Site Fencing
- Landscaping and screen planting

The sources of emissions from the waste water works

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

- Domestic population
- Commercial premises
- School
- Infiltration

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

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

The current design population equivalent of Cloughduv WWTP is 500. At design capacity the plant would discharge 113m3/day (DWF) to the Brouen River based on 225l/hd/day. Analysis of the discharge has shown non compliance for some parameters.

The design population equivalent for the proposed WWTP is 1,500. At design capacity the plant would discharge 338m3/day (DWF) to the Bride River based on 225 l/head/day. The operation of this plant will remove the primary discharge from the Brouen River (secondary discharge for storm overflows will continue to discharge to the Brouen) which will be beneficial and reduce the negative impacts on the environment.

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

Technology

The proposed WWTP shall have a sufficient number of standby pumps, storm holding facilities, sludge holding facilities, etc is provided to ensure continuation of the wastewater treatment.

The proposed plant incorporates both tertiary treatment in the form of sand filters and phosphorus removal facilities. Both of these technologies will significantly improve the quality of the effluent to be discharged.

The discharge location for the Primary Discharge from the plant is being re-located from the Brouen River to the Bride River where significant addition dilutions can be availed of.

The new plant shall include the following elements:

- New inlet pumping station
- New inlet screening works
- Forward feed and storm pumping
- Aeration tank
- Clarifier and RAS/WAS pumps with 2 No. sludge pumps and a scum pump
- Tertiary treatment sand filter system
- Sludge and storm water holding tanks
- Final effluent pumping
- Phosphorus Removal System

Techniques

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

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

Standby power generation is being provided as part of the proposed WWTP. It will be of sufficient capacity to maintain the effluent discharge standards during periods when mains electricity is not available.

Chemical storage tanks and dosing equipment shall be located within lined bunds.

An instrumentation and control system together with on site monitoring and sampling is provided to ensure satisfactory operation of the plant.

Measures planned to monitor emissions into the environment

The Cork County Council Environmental Laboratory carried out sampling of the influent and effluent in the waste water treatment plant for the purposes of this waste water discharge licence. Once the new proposed plant is commissioned the monitoring will be undertaken by Response Engineering, as they are the operating contractor. Response will be monitoring the influent and effluent on a daily basis. The proposed primary discharge point will have composite sampling (time and flow proportional capabilities) and continuous flow monitoring will also be provided. For the secondary discharge point continuous flow monitoring will be provided.

The Cork County Council Environmental Department located in Inniscarra takes samples from the Bride River upstream and downstream of the proposed discharge point from the wastewater treatment plant approximately 4 times per year.

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

List of Attachments include the following:

- Location Map Scale 1:25,000 Attachment A1 Map 1
- Site Location Map of WWTP & Pumping Station Attachment A1 Map 2
- Existing Site Layout Attachment A1 Map 3
- Proposed Site Layout Attachment A1 Map 4

SECTION B: GENERAL

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

B.1 Agglomeration Details

Name of Agglomeration:	Cloughduv Agglomeration

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:	Southern Division
	County Hall
	Carrigrohane Road
	Co. Cork
Tel:	021 427 6891
Fax:	021 427 6321
e-mail:	Patricia.power@corkcoco.ie

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

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

Name*:	Patricia Power
Address:	Area Operations South
	County Hall
	Carrigrohane Road
	Cork
Tel:	021 4285 285
Fax:	021 4276 321
e-mail:	Patricia.power@corkcoco.ie

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

Co-Applicant's Details

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

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

Design, Build & Operate Contractor Details

Name*:	Response Engineering Ltd
Address:	Railway Rd
	Charleville
	Co. Cork
Tel:	063 33400
Fax:	063 33401
e-mail:	Not Available

*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**
	√	

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*:	Noreen O'Mahony
Address:	Cork County Council
	Ballincollig/ Blarney Water Services Office
	Innishmore
	Ballincollig
	Co.Cork.
Grid ref (6E, 6N)	Existing (entrance) 145395E, 066630N New (entrance) 145353E, 066651N
Level of Treatment	Secondary (existing), Tertiary (proposed)
Primary Telephone:	021 4875643
Fax:	021 4289868
e-mail:	noreen.omahony@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
	√	

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.

Existing Location of Primary Discharge Point:

Type of Discharge	225mm diameter outfall pipe from header manhole just outside the site boundary and on to the River Brouen
Unique Point Code	SW01 - Cloughduv
Location	River Brouen, Coolmucky
Grid ref (6E, 6N)	145099E, 066702N

Proposed Location of Primary Discharge Point:

Type of Discharge	125mm rising main from final effluent pumping station to discharge point immediately downstream of Rye Court Bridge on the Bride River through a double hinge flap valve
Unique Point Code	SW01 – Cloughduv (proposed)
Location	Bride River, Ryecourt
Grid ref (6E, 6N)	145318E, 067565N

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
	√	

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.

Proposed Location of Secondary Discharge Point

Type of Discharge	225mm diameter outfall pipe from header manhole just outside the site boundary and on to the River Brouen – Emergency Overflow
Unique Point Code	SW02– Cloughduv (proposed)
Location	River Brouen, Coolmucky
Grid ref (6E, 6N)	145099E, 066702N

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**
	√	

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	Not Applicable
Unique Point Code	Not Applicable
Location	Not Applicable
Grid ref (6E, 6N)	Not Applicable

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**
		√

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:	Planning Department

	County Hall
	Carriagrohane Road
	Cork
Tel:	021 4276891
Fax:	021 4867007
e-mail:	planninginfo@corkcoco.ie

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

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

Local Authority Planning File Reference Nº:	Not Applicable

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

Attachment included	**Yes**	**No**
	√	

B.7 Other Authorities

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

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

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

Within the SFADCo Area	**Yes**	**No**
		√

B.7 (ii) Health Services Executive Region

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

Name:	Health Service Executive South
	Áras Sláinte
	Wilton Road, Cork
Tel:	021 4545011
Fax:	021 4927228
e-mail:	Not Available

B.7 (iii) Other Relevant Water Services Authorities

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

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

Relevant Authority Notified	**Yes**	**No**
		√

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

Attachment included	**Yes**	**No**
		√

B.8 Notices and Advertisements

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

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

Attachment included	**Yes**	**No**
	√	

B.9 (i) Population Equivalent of Agglomeration

TABLE B.9.1 POPULATION EQUIVALENT OF AGGLOMERATION

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

Population Equivalent	**396 (current)** **1500 (Proposed)**
Data Compiled (Year)	**2005 / 2006**
Method	**House Count /**

	Census Data

B.9 (ii) Pending Development

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

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

The current population equivalent being treated at Cloughduv WWTP is approx 396. This is based on a house count undertaken in 2005 and applying the housing occupancy figures from the 2006 census. An allowance was made for the non domestic element in particular the school.

The agglomeration includes all lands zoned under the Local Area Plan (2005). The full development of these lands in line with the Development Plan has been assessed. It is estimated that an additional 265 dwellings can be constructed together with non domestic development including a neighbourhood centre, small to medium sized industrial units and expansion of the local school. It was determined that a wastewater treatment plant capable of treating 1500 PE would easily cater for the domestic and non-domestic loads. The percentage of the projected PE to be contributed by the non-domestic activities is approx 13%.

To date two main residential developments for 94 dwellings / creche and for 78 dwellings have been granted planning permission in 2008 / 2007 respectively. These developments represent approx 65% of the additional dwellings envisaged under the Local area Plan and represent a PE of less than 550. Construction of these dwellings has yet to commence. It is noted that all developments with granted planning permission and all developments under construction have been included in the proposed upgrade of the WWTP for the agglomeration.

The prediction of future population increase for Cloughduv would result in a capacity far in excess of the current wastewater facilities. The new WWTP will however be able to accommodate this new capacity.

Part VIII Planning has been received for the construction of the new WWTP and at present a new 1500 PE WWTP is under construction. Upon completion the plant shall have be capable of accommodating additional hydraulic and organic loading without posing an environmental risk to the receiving water habitat.

B.9 (iii) FEES

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

Class of waste water discharge	Fee (in €)
Discharges from agglomeration with a population equivalent of 1001 to 2000	€15,000

Appropriate Fee Included	Yes	No
	√	

B.10 Capital Investment Programme

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

Upgrade Works

The WWTP at Cloughduv is being upgraded as a Serviced Land Initiative (SLI) project on the Water Services Investment Programme 2007-2009. Construction works have commenced and commissioning is programmed to commence in April 2009. Until that date the wastewater will be treated at the existing WWTP. The commissioning and process proving period is programmed for a three month period. The new plant will cater for a PE of 1,500 and a BOD loading of 90Kg/d. The upgrade will include:

- New inlet pumping station
- New inlet screening works
- Forward feed and storm pumping
- Aeration tank
- Clarifier and RAS/WAS pumps with 2 No. sludge pumps and a scum pump
- Tertiary treatment (sand filter system)
- Phosphorus Removal
- Sludge and storm water holding tanks
- Final effluent pumping

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

Attachment included	Yes	No
	√	

B.11 Significant Correspondence

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

Not Applicable

There was no Section 63 notice issued by the Environmental Protection Agency to Cork County Council in relation to the wastewater treatment works in Cloughduv under the Environmental Protection Agency Acts, 1992 and 2003, as amended by Section 13 of Protection of the Environment Act, 2003.

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

Attachment included	Yes	No
		√

B.12 Foreshore Act Licences.

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

Not Applicable

Cloughduv Wastewater Works does not require a Foreshore Act Licence 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
		√

SECTION C: INFRASTRUCTURE & OPERATION

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

C.1 Operational Information Requirements

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

C.1.1 Storm Water Overflows

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

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

There are no storm overflows, other than the primary and secondary overflows identified.

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.

C.1 Operation Information

Existing Waste Water Treatment Plant

The existing WWTP in CLoughduv is located to the north-west of the village. The treatment plant is designed for a population equivalent of 500, the WWTP has a current loading of approx 396 PE. There is one pumping station within the village. Most of the waste water flows by gravity to the plant.

The treatment process incorporates the following:

- Inlet works.
- Primary settlement – 1nr BMS BL 1500 litre, primary settlement tank complete with lamella plates.
- Secondary treatment – 2nr BMS B3500 Aerator units (Rotating Biological Contractor units).

- Final settlement – 2nr BMS H3500P humus tanks complete with sludge return pumps and covers.
- Outlets works – final effluent pumped to the Brouen stream.
- Control building – the control building is a metal building and the control kiosk has a dial-out facility.

The flow passes through the plant under gravity and is only pumped when the flow has been fully treated and is to be discharged to the stream. Effluent enters the plant via a 225mm sewer. The influent enters the primary settlement tank from the inlet manhole. Flow then passes through to the two RBCs which are set up to run in parallel. From there the flow passes into the clarifiers (2No) which also run in parallel before the treated effluent enters the outfall pump sump. The outfall sump pump raises the effluent to the header manhole on the public road just outside the site boundary. The treated effluent flows from the header manhole by gravity to the Brouen River.

The design dry weather flow (DWF) for the plant is 113m^3/day, which is based on a population equivalent of 500 contributing 225 l/head/day. This equates to an average flow of 4.7m^3/hr.

General Description of the Proposed New Plant

The proposal for the future wastewater treatment plant is based on construction of a new 1500PE activated sludge system complete with tertiary filter and phosphorus removal together with subsequent decommissioning of the existing plant.

The plant will treat to a 10/10 mg/l BOD/SS standard with 1 mg/l Ortho Phosphorus.

The design dry weather flow (DWF) for the plant is 338m^3/day, which is based on a population equivalent of 1500 contributing 225 l/head/day. This equates to an average flow of 14m^3/hr. The full flow to treatment is 42m^3/hr (3 x DWF) while the maximum flow to the works is 169 m^3/hr.

The plant will operate as follows:

1. The waste water will first enter an on-site inlet pumping station before entering the inlet works. The pumping station will contain 2 No. foul pumps (duty / standby) each capable of pumping 169m³/hr.
2. Flow from the inlet pumping station will be pumped to a combined screening / grit removal unit. Screening will be provided to 6mm for flows up to 50l/s. A washing and compaction system is installed reducing the screenings volume by up to 50%. An integral bypass channel has been provided for operational flexibility. Screened wastewater will pass through an aerated sedimentation tank allowing for grit removal.
3. A pumping station and storm holding facility will be provided prior to secondary treatment. The pumping station will contain 2 no. forward feed foul pumps (duty / standby) each capable of pumping 42m³/hr to the biological treatment process. There will also be 2 no. storm pumps (duty / standby) each capable of pumping 127m³/hr to the storm holding tank. A storm holding tank with a minimum of 2 hours retention capacity (253m³/hr) will be provided.

4. Storm flows will gravitate back into the foul pump chamber during times of low flow to the treatment plant. Where the retention time of the storm tank is exceeded the storm flow will overflow to the River Brouen.
5. The forward feed pumps will pump flow to the aeration tank. Two no. air blowers (duty / standby) will be installed adjacent to the aeration tank and will deliver air through fine bubble air diffusers installed on the base of the aeration tank. A mixer will also be provided.
6. The effluent then flows by gravity to the final settlement tank. The FST is another principal stage in the activated sludge process. The active sludge is separated from the effluent. The outlet from the aeration tank gravitates to the central stilling box or diffusion drum, the effluent flows out of the diffusion drum to the surface of the clarifier, and the solids settle to the sloped floor of the tank. A floor scraper is installed in the FST, the scraper scraped settled sludge to a central hopper from which sludge is withdrawn to the sludge sump.
7. A ferric storage tank and dosing system are provided for phosphorus removal.
8. A sand filter system is proposed to provide tertiary treatment of the secondary effluent.
9. The final effluent pumping station will contain 2 no. pumps (duty / standby) each capable of pumping 42 m³/hr to the outfall. The pumps are controlled using an ultrasonic level controller within the sump.
10. Sludge from the final clarifier is pumped via the sludge pumping station to either the aeration tank or to the sludge storage tank by 2 no. sludge pumps (duty / standby) with a capacity of 42m³/hr
11. Excess sludge is wasted from the system to the sludge holding tank. The sludge holding tank will provide for gravity thickening of the waste sludge. There will be a series of supernatant draw-off pipes, with valves, to provide optimum thickening and draw off capabilities.

C.1.1 Storm Water Overflow – Not Applicable

C.1.2 Pumping Stations

- There is only one pumping station located within the collection system serving the Cloughduv WWTP.
- The collection system serving the pumping station in Cloughduv is a separate system. The overflow from the pumping station operates on an emergency basis only.
- The flow from the emergency overflow, flows to a nearby stream which in turn flows to the River Bride.
- There is one duty pump within the pumping station.
- In the event of a power failure the waste water will overflow to the stream or the sump will be emptied by suction. The pumping station is checked on a daily basis by the curator.
- Details of the frequency and duration of the activation of the emergency overflow is unknown.

Attachment C.1 should contain supporting documentation with regard to the plant and process capacity, systems, storm water overflows, emergency overflows, etc., including flow diagrams of each with any relevant additional information. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in

Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, D.2, E.3 and F.2.

Attachment included	Yes	No
	√	

C.2 Outfall Design and Construction

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

Primary Discharge Point, SW01-Cloughduv (Existing)

Type of Discharge	225mm diameter outfall pipe from header manhole just outside the site boundary and on to the River Brouen
Unique Point Code	SW01 – Cloughduv
Location	River Brouen, Coolmucky
Grid Ref	145099E, 066702N

Primary Discharge Point, SW01-Cloughduv (Proposed)

Type of Discharge	125mm rising main from final effluent pumping station to Rye Court Bridge on the Bride River through a double hinge flap valve
Unique Point Code	SW01 - Cloughduv
Location	Bride River, Ryecourt
Grid ref (6E, 6N)	145318E, 067565N

The proposed primary discharge point, SW01-Cloughduv, is the main outlet from Cloughduv Wastewater Treatment Plant. The outfall runs in a northerly direction approximately 1000m from the outlet manhole to the Bride River. The point of discharge is a 125mm HDPE pipe, which discharges directly to the river.

Secondary Discharge Point, SW02-Cloughduv (Proposed)

Type of Discharge	225mm diameter outfall pipe from header manhole just outside the site boundary and on to the River Brouen – Emergency Overflow
Unique Point Code	SW02 - Cloughduv
Location	River Brouen, Coolmucky
Grid ref (6E, 6N)	145099E, 066702N

The secondary discharge point, SW02-Cloughduv, is a 225mm diameter overflow pipe from the storm tank at the wastewater treatment plant. The outfall runs in an western direction approximately 5m to the header manhole just outside the boundary of the WWTP and flows approximately 250m by gravity to the River Brouen.

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

Attachment included	**Yes**	**No**
	√	

SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT

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

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

Details of all discharges of waste water from the agglomeration should be submitted via the following web based link: http://78.137.160.73/epa_wwd_licensing/. ***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
SW 1-Cloughduv (existing)	Primary	Cork County Council	River	River Brouen	Not Applicable	145099	066702
SW 1-Cloughduv (proposed)	Primary	Cork County Council	River	Bride River	Not Applicable	145318	067565

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.

On the existing primary discharge point there is no composite sampling or composite flow monitoring. The proposed plant is currently under construction and is due to be completed in April 2009. The proposed primary discharge point will have composite sampling (time and flow proportional capabilities) and continuous flow monitoring will also be provided. For the secondary discharge point continuous flow monitoring will be provided.

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.

Monitoring in respect of Cloughduv Waste Water Licence Application

Currently the Environmental Directorate of Cork County Council does not monitor the treatment plant as it is under 2000PE. They took samples of the influent and the effluent for the purposes of this waste water discharge licence application. When the proposed plant is commissioned in April 2009 the monitoring will be undertaken by Response Engineering, as they are the operating contractor. Response will be monitoring the plant on a daily basis.

Monitoring on the Brouen River

For the purposes of the waste water discharge licence application samples were also collected upstream and downstream of the existing discharge location. The Brouen River, which is the existing receiving water body, was monitored in terms

of the Operational Water Framework by the Water laboratory of Cork County Council. The Brouen River is not part of an ongoing monitoring programme.

Monitoring on the Bride River
Samples are collected upstream and downstream of the proposed discharge location point approximately 4 times per year. The Bride River, which is the proposed receiving water body, is monitored in terms of the Operational Water Framework Directive as part of the River Basin Project by the Water laboratory of Cork County Council.

General Laboratory Information

The Wastewater Laboratory of Cork County Council is accredited for a number of analytical tests under the Irish National Accreditation Board (INAB) under the ISO 17025 international standard. The details of the Accreditation can be found in Attachment E.2. The Wastewater Laboratory of Cork County Council is currently accredited for the following parameters under the ISO 17025 system:

- pH
- Biochemical Oxygen Demand
- Chemical Oxygen Demand
- Suspended Solids
- Ammonia
- Ortho Phosphates
- Total Phosphates
- Chloride
- Sulphate

The laboratory perform a number of analytical tests e.g. fats, oil , grease and metals using an ICP-OES system and while the Wastewater Laboratory of Cork County Council is not currently accredited for extra tests the same analytical procedures and protocol are adhered to by the laboratory as would be required if the tests were accredited. The laboratory also participates in proficiency testing schemes which measure the accuracy of the results and performance of the laboratory in both the EPA scheme and the WRC Aquacheck scheme from the UK. The performance of the laboratory in these schemes is excellent and the non-accredited tests are within the performance criteria for the schemes as evaluated by the scheme coordinators.

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

Attachment included	Yes	No
	√	

E.3 Tabular data on Monitoring and Sampling Points

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

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
SW01 (existing)	Primary	Sampling	145099	066702	Y
aSW01u (Brouen)	u/s	Sampling	143568	066216	Y
aSW01d (Brouen)	d/s	Sampling	145082	066907	Y
SW01 (proposed)	Primary	Sampling	145318	067565	Y
aSW01u (Bride)	u/s	Sampling	145273	067550	Y
aSW01d (Bride)	d/s	Sampling	146046	067832	Y

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.

- 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.

- For discharges from secondary discharge points Tables F.1(ii)(a) & (b) should be completed. Furthermore, provide summary details and an assessment of the impacts of any existing or proposed emissions on the surface water or ground (aquifers, soils, sub-soils and rock environment), including any impact on environmental media other than those into which the emissions are to be made.

- Provide details of the extent and type of ground emissions at the works. For larger discharges to groundwaters, e.g., from Integrated Constructed Wetlands, large scale percolation areas, etc., a comprehensive report must be completed which should include, inter alia, topography, meteorological data, water quality, geology, hydrology, and hydrogeology. The latter must in particular present the aquifer classification and vulnerability. The Geological Survey of Ireland Groundwater Protection Scheme Dept of the Environment and Local Government, Geological Survey of Ireland, EPA (1999) methodology should be used for any such classification. This report should also identify all surface water bodies and water wells that may be at risk as a result of the ground discharge.

- Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other

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

- Provide a statement as to whether or not emissions of main polluting substances (as defined in the *Dangerous Substances Regulations S.I. No. 12 of 2001*) to water are likely to impair the environment.

- In circumstances where water abstraction points exist downstream of any discharge describe measures to be undertaken to ensure that discharges from the waste water works will not have a significant effect on faecal coliform, salmonella and protozoan pathogen numbers, e.g., Cryptosporidium and Giardia, in the receiving water environment.

- Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on –

  (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive) —

    (i) notified for the purposes of Regulation 4 of the Natural Habitats Regulations, subject to any amendments made to it by virtue of Regulation 5 of those Regulations,

    (ii) details of which have been transmitted to the Commission in accordance with Regulation 5(4) of the Natural Habitats Regulations, or

    (iii) added by virtue of Regulation 6 of the Natural Habitats Regulations to the list transmitted to the Commission in accordance with Regulation 5(4) of those Regulations,

  (b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC[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)

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

- This section should also contain full details of any modelling of discharges from the agglomeration. Full details of the assessment and any other relevant information on the receiving environment should be submitted as **Attachment F.1.**

Attachment included	**Yes**	**No**
	√	

Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other legislative standards. Submit a copy of the most recent water quality management plan or catchment management plan in place for the receiving water body. Give details of any designation under any Council Directive or regulations that apply in relation to the receiving water.

The receiving water body of the existing Cloughduv WWTP is the Brouen River, a tributary of the Bride River which ultimately discharges to the River Lee. Emergency overflows from the pump station in the collection system discharge to a small stream which ultimately discharges to the Bride River. There are no discharges to ground, or any other media.

The receiving water for the proposed WWTP will be the Bride River. Storm overflows from the WWTP will continue to discharge to the Brouen River. Emergency overflows from the pump station in the collection system will continue to discharge to a small stream which ultimately discharges to the Bride River. It is not proposed that there will be any discharges to ground, or any other media.

Specific localised flow data is not available in the vicinity of the existing / proposed discharge points and thus estimates have been prepared based on available downstream flow data and on available catchment information. These flow estimates incl DWF, 95 %ile and median flows are shown in the table below. They have been estimated based on hydrometric data from an ESB station at Ovens (as provided by the EPA) and from catchment information.

Table F1-1: Flow Data

Parameter	**Bride River at Cloughduv**	**Brouen River at Cloughduv**	**ESB Station at Ovens** (Code 19016) W550700 155000
95%ile (m^3/s)	0.045[1]	0.009[1]	0.07
DWF (m^3/s)	0.039[2]	0.0058[2]	0.06
Median (m^3/s)	2.42[2]	0.483[2]	3.76[3]

1 Based on 95%ile for Ovens and on catchment information.
2 Assumed to be in same proportion to Ovens station as 95%ile flow.
3 Median flow provided for years 1977 to 2006 however this excludes the years 1983;1984;1990;1991;1993;1994;1996;1997 and 1998 as records are not available.

On a DWF basis there are 5.8 dilutions available in the Brouen River for the existing primary discharge while there are 10 dilutions available in the Bride River for the proposed primary discharge when the proposed WWTP is at design load.

While the flow from the WWTP will vary over time it is considered that at times of DWF in the river the discharge from the WWTP will also correspond to its DWF. Thus the estimated volumetric contribution by the site emissions to the Dry Weather Flow of the receiving waters, expressed as a % (% DWF) is provided on that basis as follows:

Brouen River DWF – 0.0058 m^3/s
Existing WWTP DWF discharge at design load – 0.0013 m^3/s
Estimated Volumetric Contribution – 18%

Bride River DWF – 0.039 m^3/s
Proposed WWTP DWF discharge at design load – 0.0039 m^3/s
Estimated Volumetric Contribution – 9%

Receiving Environment

Water Quality analysis data for the Brouen River and the Bride River was undertaken by Cork County Council and this is presented in Attachment F1.

Biological Quality ratings are available from the EPA for two locations along the Bride River in the vicinity of the treatment plant. These are located at the LHS at the bridge at Crookstown (0600) and at the bridge south of Knocknagoul (0900).

Table F1-2: Biological Quality Rating for Bride River – Upstream and Downstream of Discharge

No.	Location	EPA Biological Quality Rating (Q Values)					
		1990	1994	1997	1999	2003	2005
0600	Br at Crookstown LHS	4-5	4	4	4	4-5	4
0900	Br S of Knocknagoul	5	4-5	4	4-5	4-5	4-5

No Biological Quality ratings are available for the Brouen River.

There is no data regarding sediment quality in the Brouen River or the Bride River.

Effluent Standards

The design treated effluent quality is shown in the table below.

Table F1-3: Design Effluent Standards

Parameter	Effluent Standards (mg/l) (Existing)	Effluent Standards (mg/l) (Proposed)
Biological Oxygen	25	10

Demand (BOD)		
Suspended Solids (SS)	35	10
Ortho Phosphorus	Not Applicable	1

The existing discharge ranged from 39 – 145mg/l BOD and 61 – 269 mg/l SS as per monitoring over the period 10/07/08 to 15/01/09. The discharge is currently in excess of the design effluent standards. It is noted that the existing plant is due to be decommissioned shortly.

The Urban Wastewater Treatment Regulations S.I. 254 of 2001 require that wastewater arising from populations of less than 2000, shall, by the end of 2005, be subject to appropriate treatment prior to discharge. Appropriate treatment is defined as:

"…any process and / or disposal system which after discharge allows the receiving waters to meet the relevant quality objectives and the relevant provisions if the Directive and of other community Directives"

Water Quality Standards

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

The Bride River and the Brouen River are included in the SWRBD. The overall objectives of the SWRBD project include the following:

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

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

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

The SWRBD have determined the Ecological Status as Good for the 228 Lee waterbody which encompasses the existing and proposed discharge locations to

the Brouen and Bride respectively. The Water framework Objective is Protect. Ref attachment F1.

Designations under relevant directives

Brouen River:

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

The Brouen River is not designated as Salmonid Water under Salmonid Water Regulations, S.I. 293 of 1988. The Bride River, into which the Brouen River flows, is also not designated as Salmonid water.

The Brouen River is not designated a Bathing Water under the Bathing Water Regulations, S.I. 178 of 1998 as amended. The Bride River, into which the Brouen River flows, is also not designated as a bathing water.

The Brouen River is not a designated Sensitive Area under the Urban Wastewater Treatment Regulations 2001 (S.I. 254 of 2001). The Bride River is also not designated as a sensitive Area.

Bride River:

The Bride River is not a designated Shellfish area under the Shellfish Waters Regulations, S.I.200 of 1994.

The Bride River is not designated as a Salmonid Water under Salmonid Water Regulations, S.I. 293 of 1988. The Lee River, into which the water from the Bride will ultimately discharge, is designated a Salmonid Water under this directive. It is important therefore that the flow from the Bride River does not have a negative impact on water quality in the Lee River.

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

The Bride River is not a designated Sensitive Area under the Urban Wastewater Treatment Regulations 2001 (S.I. 254 of 2001).

Based on work undertaken for Cork County Council in 2005 / 2006 by Dixon Brosnan the following can be stated:

> "No formal designations apply to the Brouen and Bride Rivers. However Sea Lamprey (Petromyzon marinus) has been recorded in the main channel of the River Lee and is known to spawn in the Bride. Ammocoete larve (juvenile lamprey) has been found in the Bride and it is considered likely that all three lamprey species Sea, River (Lampetra fluviatilis) and Brook Lamprey (Lampetra planeri) occur in this river. All three species are listed in Annex II of the Habitats Directive. Two other Annex II species occur within the Bride namely salmon (Salmo salar) and otter (Lutra lutra).
>
> On the basis of its salmon population and spawning grounds the Bride is included in a 'shadow list' of proposed Special Areas of Conservation

submitted to the European Commission (DGXI Natura, 2000) under a group NGO initiative sponsored by The Heritage Council for Ireland. However, this is not a formal designation.

The Bride River is a productive brown trout fishery particularly in its lower reaches where it flows over limestone and is considered the most important spawning / nursery tributary of the Lee. A high proportion of the river has retained a relatively natural flow pattern and this, combined with an underlying limestone geology, creates good habitat for brown trout. The average size is 0.5lb; however larger fish are taken on occasion (O Reilly 1998). The Bride is not noted as a sea trout river although it may contain an occasional fish. As the Bride River meets the Lee downstream of Innescarra dam, the Bride is of particular importance as a spawning river for salmon. The river gets a big run of salmon which generally arrive after the fishing season has ended (O Reilly 1998).

The Brouen into which the discharge from the existing WWTP discharges is one of the largest tributaries of the Bride and contains a population of brown trout. The upper sections of the river (from the source to Crookstown) are characterized by steep gradients and fast flowing waters with clean gravels. These stretches of the stream are suitable for salmonid spawning. Although brown trout were noted downstream of the discharge point from Cloughduv, no spawning gravels are available for salmonids in the lower reaches of this watercourse."

A copy of the Dixon Brosnan report 'River Bride Assessment', Revision 0-Issue to client, dated 26th January 2006 is included in attachment F1 for information.

Areas of Conservation

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

Special Areas of Conservation:

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

The Brouen River and the Bride River are not designated Special Areas of Conservation.

Natural Heritage Areas:

Natural Heritage Areas are the basic designation for wildlife. An NHA is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection.

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

The Brouen River and the Bride River do not flow through any Natural Heritage Areas (NHA).

Special Protected Areas:

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

No designated special protected areas are located along the Brouen River or along the Bride River. There are also no designated SPA sites within 2Km of the discharges from Cloughduv.

Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those to which the emissions are made.

Existing WWTP – Primary Discharge to Brouen River

Assimilative Capacity of the Receiving Water:

a) **Mass Balance Equation for Orthophosphate:**

Median flow of River = 0.483 m^3/sec
Median oPO_4-P in River (upstream) = 0.05 mg/L (based on one sample 15/01/2009)

Average volume of discharge = 0.001 m^3/sec (DWF at design load)
Max value for oPO_4-P in discharge = 9.08 mg/L (based on sample of 10/07/08)

$$C_{final} = \frac{(0.483 \times 0.05) + (0.001 \times 9.08)}{0.483 + 0.001}$$

C_{final} = 0.0687 mg/L oPO_4-P

The increase in Orthophosphate due to the discharge of the existing Cloughduv WWTP is 0.0187 mg/L.

The Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008 set out in Table 9 the requirement to achieve a Molbydate Reactive Phosphorus (MRP) of ≤0.035 mg/l based on mean flows for River Water Bodies classified as having Good Status. This is not achieved based on the foregoing. It is noted that this plant is to be decommissioned shortly.

b) **Mass Balance Equation for BOD:**

Flow of River (95%) = 0.009 m^3/sec
Average BOD in River (upstream) = 1.0 mg/L (based on one sample 15/01/2009)

Average volume of discharge = 0.001 m^3/sec
Max BOD in discharge = 145 mg/L (based on sample of 10/07/08)

$$C_{final} = \frac{(0.009 \times 1.0) + (0.001 \times 145)}{0.009 + 0.001}$$

C_{final} = 15.4 mg/L BOD

The increase in BOD due to the discharge of the existing Cloughduv WWTP is 14.4 mg/L.

The Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008 set out in Table 9 the requirement to achieve a BOD of ≤2.6 mg/l based on 95%ile flows for River Water Bodies classified as having Good Status. This is not achieved based on the foregoing. It is noted that this plant is to be decommissioned shortly.

c) **Mass Balance Equation for Suspended Solids:**

Flow of River (95%) = 0.009 m^3/sec
Average SS in River (upstream) = 2.5 mg/L (based on one sample 15/01/2009)

Average volume of discharge = 0.001 m^3/sec
Max Suspended Solids in discharge = 269 mg/L (based on sample of 10/07/08)

$$C_{final} = \frac{(0.009 \times 2.5) + (0.001 \times 269)}{0.009 + 0.001}$$

C_{final} = 29.15 mg/L Suspended Solids

The increase in Suspended Solids due to the discharge of the existing Cloughduv WWTP is 26.65 mg/L.

The Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008 does not set out a requirement in the case of Suspended Solids. The requirement under the salmonid regulations (S.I. No 293 of 1988) is

to achieve a limit of 25mg/l. This is not achieved based on the foregoing. It is noted that this plant is to be decommissioned shortly.

Proposed WWTP – Proposed Primary Discharge to Bride River

Assimilative Capacity of the Receiving Water:

a) **Mass Balance Equation for Orthophosphate:**

Median flow of River = 2.42 m^3/sec
Median oPO_4-P in River (upstream) = 0.033 mg/L (based on three samples)

Average volume of discharge = 0.0039 m^3/sec
Median value for oPO_4-P in discharge = 1.0 mg/L

$$C_{final} = \frac{(2.42 \times 0.033) + (0.0039 \times 1.0)}{2.42 + 0.0039}$$

C_{final} = 0.0346 mg/L oPO_4-P

The increase in Orthophosphate due to the discharge of the proposed Cloughduv WWTP to the Bride River is 0.0016 mg/L.

The Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008 set out in Table 9 the requirement to achieve a Molbydate Reactive Phosphorus (MRP) of ≤0.035 mg/l based on mean flows for River Water Bodies classified as having Good Status. This is achieved based on the foregoing.

b) **Mass Balance Equation for BOD:**

Flow of River (95%) = 0.045 m^3/sec
Average BOD in River (upstream) = 0.5 mg/L (based on 4 samples)

Average volume of discharge = 0.0039 m^3/sec
Max BOD in discharge = 10 mg/L

$$C_{final} = \frac{(0.045 \times 0.5) + (0.0039 \times 10)}{0.045 + 0.0039}$$

C_{final} = 1.26 mg/L BOD

The increase in BOD due to the discharge of the proposed Cloughduv WWTP to the Bride River is 0.76 mg/L.

The Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008 set out in Table 9 the requirement to achieve a BOD of ≤2.6 mg/l based on 95% flows for River Water Bodies classified as having Good Status. This is achieved based on the foregoing.

c) **Mass Balance Equation for Suspended Solids:**

Flow of River (95%) = 0.045 m^3/sec
Average Suspended Solids in River (upstream) = 10 mg/L (based on Dixon Brosnan survey 2004)

Average volume of discharge = 0.0039 m^3/sec
Average Suspended Solids in discharge = 10 mg/L

$$C_{final} = \frac{(0.045 \times 10) + (0.0039 \times 10)}{0.045 + 0.0039}$$

C_{final} = 10 mg/L Suspended Solids

The increase in Suspended Solids due to the discharge of the proposed Cloughduv WWTP to the Bride River is 0 mg/L.

The Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008 does not set out a requirement in the case of Suspended Solids. The requirement under the salmonid regulations (S.I. No 293 of 1988) is to achieve a limit of 25mg/l. This is achieved based on the forgoing.

Provide details of the extent and type of ground emissions at the works.

There are no emissions to ground at the works (existing or proposed)

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.

A screening programme was undertaken for the parameters set out in the Dangerous Substances Regulations S. I. No 12 of 2001 as per the table below. This programme measured the levels in the discharge from the existing WWTP on two occasions and measured river levels (upstream and downstream of the existing primary discharge point) on the Brouen on one occasion. It is evident that all parameters measured downstream were found to be below the level of detection. Similarly in most cases with the exception of copper, cyanide and zinc, the upstream and discharge levels were also found to be below the level of detection.

It is noted that in the case of atrizine, dichloromethane, simazine, toluene, xylenes, arsenic, chromium, lead and nickel, discharges at the level of detection would still ensure compliance with S.I. 12 / 2001 and it is therefore not considered necessary to undertake assimilative capacity assessments for such parameters.

Parameter	Discharge		Upstream	Downstream	Standard in river	
	10-Jul-08	15-Jan-09	15-Jan-09	15-Jan-09	AA*	SI 12/2001**
	µg/l		µg/l	µg/l	µg/l	
Atrazine		<0.01	<0.01	<0.01	0.60	1.00
Dichloromethane		<1	<1	<1	20.00	10.00
Simazine		<0.01	<0.01	<0.01	1.00	1.00
Toluene		<1	<1	<1	10.00	10.00
Xylenes		<1	<1	<1	10.00	10.00
Arsenic		<0.96	<0.96	<0.96	25.00	25.00
Chromium	<20	<20	0.00	<20		30
Copper	201.00	<49	<20	<20	30	30
Cyanide		6.00	5.00	<5	10.00	10.00
Lead	<20	<20	<20	<20	7.20	10
Nickel	<20	<20	<20	<20	20.00	50
Zinc	112.00	<20	<20	<20	100	100

* AA (Annual Average) values as set out in Schedule 5 and 6 of The Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008

** S.I. No. 12/2001 - Water Quality (Dangerous Substances) Regulations, 2001

In the case of copper, cyanide and zinc detectable levels were measured in the discharge from the WWTP. Given that downstream measurements were below the level of detection an assimilative capacity assessment has little meaning. The increase due to the discharge can however be demonstrated and this is presented below:

Parameter	**Existing Primary Discharge**	**Proposed Primary Discharge**	**Comment**
	µg/l	µg/l	
Copper	18.4	11.4	Standard of 30 µg/l. Thus will comply.
Cyanide	0.8800	0.5500	Standard is 10 µg/l; d/s is < 5 µg/l thus will comply.
Zinc	9.7	6	Standard of 100. Thus will comply.

In circumstances where water abstraction exist downstream of any discharge describe measures to be undertaken to ensure that discharges from the wastewater works will not have a significant effect on faecal

coliform, salmonella and protozoan pathogen numbers, e.g., iardia, in the receiving water environment.

There are no abstractions from the Brouen River or the Bride River downstream of the existing and proposed discharge points.

Indicate whether or not the emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have an effect a Natural Heritage Area, site of community importance under the habitats directive, special area of conservation or a site classified under the conservation of wildbirds directive.

It is not considered that the emissions for the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have an effect a Natural Heritage Area, site of community importance under the habitats directive, special area of conservation or a site classified under the conservation of wildbirds directive.

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

Given the nature and scale of the discharges to the receiving environment it is not considered necessary to provide any additional measures specific to minimising pollution over long distances or in the territory of other states.

Details of any modelling of discharges from the agglomeration.

No modelling has been undertaken of the discharges from the agglomeration.

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 IDs	Distance Downstream in meters from emission point to abstraction point	6E- Digit GPS National Irish Grid Reference	6N- Digit GPS National Irish 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.

The effluent from the existing primary discharge point discharges to the River Brouen. While the effluent from the proposed primary discharge point will discharge into the Bride River and the effluent from the proposed secondary discharge point will discharge into the Brouen River. There are no drinking water abstraction points further down stream of the existing or proposed discharge points on either the Brouen or the Bride River.

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,
- Bathing Water Directive 76/160/EEC, and
- Shellfish Waters Directive (79/923/EEC).

Dangerous Substances Directive 2006/11/EC

A screening programme was undertaken for all of the substances listed in S.I. No 12/2001 – Water Quality (Dangerous Substances) Regulations, 2001 with the exception of tributyltin and fluoride.

The assessment for atrazine, dichloromethane, simazine, toluene, xylenes, arsenic, chromium, lead and nickel showed that the discharge from the WWTP, the upstream and downstream river samples were all below the level of detection. Given the standards required for river water and the dilutions available even if the discharge was at the limit of the level of detection all of these parameters are in compliance.

In the case of copper, cyanide and zinc detectable levels were measured in the discharge from the WWTP. Given that downstream measurements were below the level of detection an assimilative capacity assessment has little meaning. The increase due to the discharge was however calculated and this showed that the increases were lower than the required standard.

Water Framework Directive 2000/60/EC

The Brouen and Bride Rivers have been determined to have Good Status under the Water Framework Directive with an objective to Protect. A point source risk is noted based on insufficient future assimilative capacity 2015 (existing discharge location).

The assimilative capacity assessments set out in Section F1 demonstrate that the current discharge is not compliant with the water framework directive. However based on the assimilative capacity assessments compliance will be achieved once the new WWTP is operational and the discharge is to the Bride

River. The new plant will discharge to a larger water body giving increased dilutions and will also provide an enhanced level of treatment including tertiary treatment and phosphorus removal with effluent discharge standards as follows:

BOD – 10mg/l
SS – 10mg/l
Ortho P – 1mg/l

Birds Directive 79/409/EEC

No designated Special Protection Areas are located along the Brouen River or the Bride River.

Groundwater Directives 2006/118/EC

There are no discharges to ground from the existing and proposed WWTP's.

Drinking Water Directives 80/778/EEC

There are no drinking water abstractions along the Brouen River or along the Bride River.

Urban Waste Water Treatment Directive 91/271/EEC

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

The Regulations require that wastewater arising from populations of less than 2000, shall, by the end of 2005, be subject to appropriate treatment prior to discharge. Appropriate treatment is defined as:

"…any process and / or disposal system which after discharge allows the receiving waters to meet the relevant quality objectives and the relevant provisions if the Directive and of other community Di.rectives"

Construction of the proposed Cloughduv Wastewater Treatment Plant is due to be completed in April 2009 and is designed to treat effluent to a 10mg/l BOD; 10mg/l SS and 1mg/l Ortho P standard. These standards have been adopted to ensure compliance with the requirements of the Wastewater Treatment Regulations (S.I. 254 of 2001) as set out above.

Habitats Directive 92/43/EEC

The area which includes the Brouen River and the Bride River is not a Candidate Special Area of Conservation.

Environmental Liabilities Directive 2004/35/EC

The Environmental Liability Directive has not been addressed as part of this application. However it is noted that in order to meet the potential requirements of this directive a decision was taken to upgrade the WWTP at Cloughduv and to move the outfall for the Primary discharge from the Brouen River to the Bride River.

Bathing Water Directive 76/160/EEC

The Brouen River and the Bride River are not designated Bathing Waters under the Bathing Water Regulations, S.I. 178 of 1998 as amended.

Shellfish Directive 79/923/EEC

The Brouen River and the Bride River are not designated Shellfish Areas under the Shellfish Waters Regulations, S.I. 200 of 1994.

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

Attachment included	Yes	No
	√	

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

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

The existing WWTP does not incorporate phosphorus removal facilities. The plant discharges to the Brouen River which has Good Status under the Water Framework Directive. The Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008 set out in Table 9 the requirement to achieve a Molbydate Reactive Phosphorus (MRP) of ≤0.035 mg/l based on mean flows for River Water Bodies classified as having Good Status. This is not achieved however it is noted that this plant is to be decommissioned shortly.

The proposed WWTP will incorporate phosphorus removal facilities. The plant will discharges to the Bride River which has Good Status under the Water Framework Directive. The Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008 set out in Table 9 the requirement to achieve a Molbydate Reactive Phosphorus (MRP) of ≤0.035 mg/l based on mean flows for

River Water Bodies classified as having Good Status. Based on the assimilative capacity assessment this will be achieved.

The P measures report states the following:

River – Bride south – 19B04 (Lee trib) – (Section 2)
Reach of River – To maintain quality rating of Q4 of Station 0900 – Br S of Knocknagoul
Standard – Year 2005 Q4

Sanitary Services Measures:

Targets – determine impact of Cloughduv MWWTP (?P.E.) (1.51km u/s 0900)
Actions – Cloughduv upgrade of septic tank proposed
Progress to date – Cloughduv package plant constructed and operational
Corrective Actions – Review 2008. Proposed upgrade submitted under WSIP 2007 – 2009

The impact of the cloughduv MWWTP has been determined. Significant progress has been made on the Corrective Action noted above. The proposed WWTP is at an advanced stage of construction with commissioning due to commence in April 2009.

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

Attachment included	**Yes**	**No**
	√	

G.3 Impact Mitigation

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

Currently a new Waste Water Treatment Plant is under construction. The new treatment plant includes an inlet pumping station, inlet screening, an aeration tank, a clarifier, a tertiary sand filter, a sludge holding tank and a storm holding tank. Phosphorus removal is provided by ferric dosing.

The construction of the new WWTP is well advanced and is due to be completed in April 2009. The existing WWTP will be decommissioned once the new works are commissioned.

Based on the assimilative capacity assessments it is not envisaged that there will be a deterioration in the chemical or ecological status in the Bride River.

Discharges from the proposed WWTP will not affect groundwater.

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

intended for human consumption that will be affected by the proposed WWTP discharges.

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

Attachment included	Yes	No
	√	

G.4 Storm Water Overflow

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

There are no storm water overflows within the agglomeration other that those from the existing primary discharge. The proposed plant will have a secondary discharge point comprising storm water overflows. The proposed WWTP will provide for storm water storage (2 Hours retention) and all storm water overflows will be screened to 6mm.

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

Attachment included	Yes	No
		√

SECTION H: DECLARATION

Declaration

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

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

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

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

Signed by : Patricia Power **Date :** 24 Feb 09
(on behalf of the organisation)

Print signature name: PATRICIA POWER

Position in organisation: Director of Services