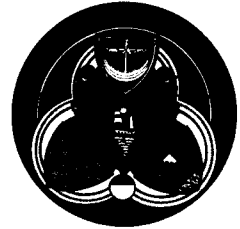


Comhairle Contae Chorcaí Cork County Council

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

A0443-01



Environmental Protection Agency,
P.O.Box 3000,
Johnstown Castle Estate,
County Wexford.



Our Ref.: BOL/HALF/1209

22 December 2009

Sub.: Waste Water Discharge License Application for the Agglomeration of Halfway Village, County Cork.

Dear Sir/Madam,

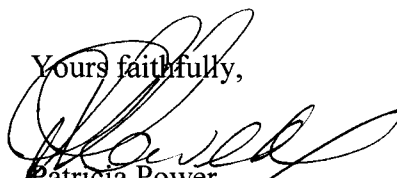
Please find enclosed the waste water discharge license application for the agglomeration of Halfway Village in County Cork.

The following are the documents enclosed as per the application guide note.

- 1 No. signed hard copies of originals.
- 1 No. copy of the originals.
- 2 No. CD-ROM with documentation in electronic searchable PDF,
- 1 No. CD-ROM with GIS Data, Table D.2, Table E.3. and Table F.2

The content of the electronic files is true copy of the original hard copy.

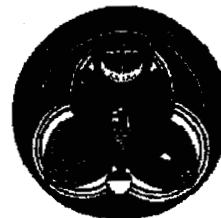
Yours faithfully,


Patricia Power
Director of Services



Comhairle Contae Chorcaí Cork County Council

Environmental Directorate,
Inniscarra, Co. Cork.
Tel. No. (021) 4532700 • Fax No. (021) 4532727
Web: www.corkcoco.ie
An Stiúrthóireacht Comhshaoil,
Inis Cara, Co. Corcaigh.
Fón: (021) 4532700 • Faisc: (021) 4532727
Suíomh Gréasáin: www.corkcoco.ie



Mr. Frank Clinton,
Program Manager,
Office of Climate, Licensing & Resource Use,
Environment Protection Agency,
Headquarters,
PO Box 3000,
Johnstown Castle Estate,
County Wexford.

16th December, 2009

Re: Waste Water Discharge (Authorisation) Regulations 2007 – fees payable in respect of applications to be submitted by 22nd December, 2009.

Dear Mr. Clinton,

I refer to the 72 certificate applications and 3 discharge authorisation licence applications which will be submitted by the council under the above regulations before the 22nd December next.

I note that the fees payable in respect of these applications amount to €246,000 and refer you to our letter of 7th November 2008 (sent by Ted O'Leary, Senior Executive Officer) seeking a rebate/reduction, as is provided for under Art 38 (3) of the regulations. I note that since that letter the council has paid a further € 570,000 in applications fees meaning that the total amount paid by the council to date amounts to € 1,245,000.

As you will appreciate, in the current economic climate, the amount payable in respect of this final batch of applications is a significant sum that was not budgeted for in 2009. Moreover we have paid a substantial amount in fees already and have made our case for a reduction/rebate. Accordingly, I must advise that we are not submitting payment in respect of these applications as we anticipate the rebate due to the council exceeds the fees payable.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Louis Duffy', written over a horizontal line.

Louis Duffy,
Director of Service,
Environment & Emergency Services Directorate



**CORK COUNTY COUNCIL
(Southern Division)**

**APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY
FOR A WASTEWATER CERTIFICATE OF AUTHORISATION**
under the Wastewater Discharge (Authorisation) Regulations 2007 (S.I. No.
684 of 2007)



Location: The agglomeration of Halfway, County Cork

Category of application: < 500 PE

Date Application Lodged: December 22nd 2009



WASTE Application Form



Waste Water Discharge Certificate of Authorisation Application Form

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EPA Ref. N^o: (Office use only)	<input type="text"/>
---	----------------------

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

Tracking Amendments to Draft Application Form

Version No.	Date	Amendment since previous version	Reason
V. 1.	12/06/2009	N/A	
V.2.	17/06/2009	<p>Delete reference to Design Build and Operate</p> <p>Delete the requirement to provide contact information for the associated waste water treatment plant</p> <p>Replace references to the Water Services investment Programme with the Small Schemes Programme</p> <p>Update references to new legislation</p> <p>Inclusion of the requirement to submit information on private WWTPs within the agglomeration.</p>	<p>To accurately reflect the information required for the small schemes programme</p> <p>To accurately reflect the information required and the scale of the waste water works</p> <p>To accurately reflect the information required for the small schemes programme</p> <p>To reflect changes in legislation</p> <p>To obtain an overview of all discharges within the agglomeration.</p>

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Environmental Protection Agency
 Application for a Waste Water Discharge Certificate of Authorisation
 Waste Water Discharge (Authorisation) Regulations, 2007.

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ABOUT THIS APPLICATION FORM

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

The Application Form **must** be completed in accordance with the instructions and guidance provided in the *Waste Water Discharge Certificate of Authorisation Application Guidance Note*. The Guidance Note gives an overview of Waste Water Certificates of Authorisation, outlines the certification 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 Certificate of Authorisation must contain the information prescribed in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). Regulation 24 of the Regulations sets out the statutory requirements for information to accompany a Certificate of Authorisation 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 with respect to Regulation 24 requirements, please complete the Regulation 24 Checklist provided in the following web based tool: http://78.137.160.73/epa_wwd_licensing/.

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 Certificates of Authorisation, and for the processing of reviews of such Certificates, appears 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.

An application for a Certificate of Authorisation must be submitted on the appropriate form (available from the Agency website – <http://www.epa.ie/whatwedo/licensing/wwda/>) with the correct fee, and should contain relevant supporting documentation as attachments. The application should be based on responses to the form and include supporting written text and the appropriate use of tables and drawings. Where point source emissions occur, a system of unique reference numbers should be used to denote each discharge point. These should be simple, logical, and traceable throughout the application.

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

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

Additional information may need to be submitted beyond that which is explicitly requested on this form. Any references made should be supported by a bibliography. The Agency may request further information (under notices provided for in the Regulations) 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 Certificate of Authorisation is an offence under the Waste Water Discharge (Authorisation) Regulations, 2007.

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

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

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

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

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SECTION A: NON-TECHNICAL SUMMARY

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

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

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

A description of:

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

Supporting information should form **Attachment N° A.1**

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SECTION A: NON-TECHNICAL SUMMARY

Halfway is situated approximately 12 kilometres southwest of Cork City and 13 kilometres to the north east of Bandon. To the immediate south of Halfway lies the Owenboy River and the busy National Secondary Road, the N71. The old Cork-Bandon Road runs through the settlement. The development of Halfway is constrained by its position between a steep hillside on the North and the N71 to the South. Halfway is designated as a village within the Bandon Electoral Area Local Area Plan.

The Waste Water Works and the Activities Carried Out Therein

A new treatment plant for the area was identified in Cork County Council's 'Assessment of Water Services Needs 2004' and was constructed in 2005, eliminating existing inappropriate discharges to the Owenboy River. This treatment plant has a capacity of 450 P.E. (population equivalent) but currently operates at 230 P.E. As part of a joint venture deal between the developer and Cork County Council, the wastewater treatment plant developed as part of the 'An Bruach' development also serves the village of Halfway.

The plant at Halfway is a Membrane Bio-Reactor Treatment Plant (known as an MBR plant). Influent initially gravitates into an underground inlet sump via an automatic screen and flume. From the inlet sump the effluent is pumped to a Primary Settlement Tank, in which effluent is allowed to settle. The effluent then flows into the adjacent MBR tank for further treatment by means of membrane treatment. In the event of high storm flows effluent may bypass the MBR Plant by overflowing at the inlet sump and discharging to the outlet flume.

Halfway WWTP is currently being operated by a private operator (Bord Na Mona) under a short term Operation and Maintenance Contract, on behalf of Cork County Council. The Service Provider is fully responsible for the provision of all plant materials including consumables and labour and also licences and permits necessary to ensure that the facility is operated and maintained in accordance with the best practice and any performance requirements stipulated in the Employer's Requirements.

There are no employees based at this site but the plant is fully automated with permanent phone links to the operator if a problem should arise. The site is visited at least once per week for inspection and maintenance.

The sources of emissions from the waste water works

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

- Domestic population
- Commercial premises
- Infiltration

The sewerage from all commercial premises (Shop/Post Office/Petrol Station (All in One), and a Public House) is collected via the public sewer and treated in conjunction

with the domestic waste at the WWTP. There is no trade effluent discharging to the sewerage network.

Currently the WWTP is receiving flows ranging from 6m³/day to 72m³/day with an average DWF of 21m³/day entering the plant.

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

The final effluent is discharged to the Owenboy River via a 150mm diameter HDPE diffused pipe. Studies carried out show a dilution factor of 34.5 in the Owenboy River which is more than 4 times the minimum recommended 8.

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

Technology

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

The treatment works consists of the following elements:

- Raw Feed Pumps
- Inlet Screen
- Anoxic Tank & Mixers
- Membrane Bio Reactors
- Air Blowers
- Permeate Pumping Station
- Mixed Liquor Recycle Pumps
- Sludge Storage Tank
- Ferric Chloride Dosing System
- Odour Control
- Standby Generator
- Composite Sampler
- Outfall to Owenboy River via diffused pipe

Techniques

The new 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.

A complete new WWTP was recently commissioned for the village, replacing existing discharges to the Owenboy River. In addition to the commissioning of the new WWTP, the collection system for the village was also examined with a regard to reducing the infiltration of surface/storm water in to the sewerage network.

Measures planned to monitor emissions into the environment

The Cork County Council Environmental Laboratory does not carry out sampling of the influent and effluent at Halfway WWTP, nor is there a sampling programme carried out on the Owenboy River.

Sampling is undertaken by Bord Na Mona on a weekly basis who operate and maintain the WWTP For the purposes of this Waste Water Discharge Certificate sampling was carried out on one occasion by Cork County Council. The wastewater treatment plant is equipped with automatic samplers on the inlet, overflow and outlet lines

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

List of Attachments include the following:

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

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SECTION B: GENERAL

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

B.1 Agglomeration Details

Name of Agglomeration: Halfway 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 Certificate of Authorisation application relates. It should have the boundary of the agglomeration to which the Certificate of Authorisation 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 Certificate of Authorisation application.

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

Attachment included	Yes	No
	√	

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

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

Name*:	Mr Peter Quinn
Address:	Bord Na Mona Environmental Ltd
	Main Street
	Newbridge
	Co. Kildare
Grid ref (6E, 6N)	160474,061310
Level of Treatment	Secondary

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

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

Attachment included	Yes	No
	√	

B.3 Location of Primary Discharge Point

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

Discharge to	Surface Water – Owenboy River
Type of Discharge	150mm diameter HDPE pipe discharging from the outlet chamber to the Owenboy River via diffused pipe.
Unique Point Code	SW01HALF
Location	Owenboy River, Ballyhooleen
Grid ref (6E, 6N)	160473, 061305

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

Attachment included	Yes	No
	√	

B.4 Location of Secondary Discharge Point(s)

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

Discharge to	Not Applicable
Type of Discharge	
Unique Point Code	
Location	
Grid ref (6E, 6N)	

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

Attachment included	Yes	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	
Location	
Grid ref (6E, 6N)	

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

Attachment included	Yes	No
		√

B.6 Planning Authority

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

Name:	Cork County Council
Address:	Planning Department
	County Hall
	Carrigrohane 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 N^o:	S/01/4677
---	-----------

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
Address:	Áras Sláinte Wilton Road, Cork
Tel:	021 4545011
Fax:	021 4927228
e-mail:	Not Available

B. 8(i) Population Equivalent of Agglomeration

TABLE B.8.1 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	Design Capacity = 450 Current PE = 230
Data Compiled (Year)	2009
Method	Desk Study

B.8 (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 waters.

B.8 (iii) FEES

State the relevant Class of waste water discharge as per Regulation 5, 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 €)
Discharge from agglomeration with a population equivalent of less than 500	€3,000

Appropriate Fee Included	Yes	No
		√*

*please see copy of attached letter sent by registered post to Mr F. Clinton ,Programme Manager , Licencing Unit EPA on December 18th 2009

B.9 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 Water Services Investment Plans) 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.

NOT APPLICABLE

Attachment B.9 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.10 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

Attachment B.10 should contain a summary of any relevant correspondence issued in relation to a Section 63 notice.

Attachment included	Yes	No
		√

B.11 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

Attachment B.11 should contain the most recent licence issued under the Foreshore Act 1933, including a copy of **all** conditions attached to the licence and any monitoring returns for the previous 12-month period, if applicable.

Attachment included	Yes	No
		√

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SECTION C: INFRASTRUCTURE & OPERATION

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 Waste Water Treatment Plant

The Waste Water Treatment Plant in Halfway was constructed in 2005 as a joint venture between Cork County Council and a developer. The plant serves the development of 59 dwelling in 'An Bruach' as well as the village of Halfway. The treatment plant is located to the South West of the village.

The influent flows by gravity to the WWTP, however, not all areas can discharge to the public sewer due to the topography of the catchment. There is one pumping station located to the south of the village. Part of the village discharges waste water to the sewer network which flows by gravity to the pumping station; this is then pumped back up to the public gravity sewer.

The plant has the hydraulic design capacity to treat waste water discharges for a population equivalent of up to 450PE.

The design dry weather flow (DWF) for the plant is 90m³/day, which is based on a population equivalent of 450 contributing 200 l/head/day. This equates to an average flow of 3.75m³/hr. The current PE being served by the WWTP is 230, which equates to a DWF of 46m³/day.

The following drawings, showing the locations of the treatment plant and discharge point, along with a schematic plan of the plant are included in the attachment.

Table C1-1: Table of Attachments

Item	Title	Attachment No.
1	Wastewater Treatment Plant Site Plan	C1 – Dwg 01
2	Schematic Showing General Arrangement of MBR Plant 1/50	C1 – Dwg 02

General Description of Plant Process

An outline of the processes involved at Halfway Waste Water Treatment Plant is as follows:

- Raw Feed Pumps
- Inlet Screen
- Anoxic Tank & Mixers
- Membrane Bio Reactors
- Air Blowers
- Permeate Pumping Station
- Mixed Liquor Recycle Pumps
- Sludge Storage Tank
- Ferric Chloride Dosing System
- Odour Control
- Standby Generator
- Composite Sampler
- Outfall to Owenboy River via diffused pipe

Raw Feed Pumps

The Raw Feed Pumping Station (RFPS) collects incoming gravity flow of sewage and pumps it at 3.5l/s to the Inlet Screen located above the Anoxic Tank. The pumping station is fitting with a galvanised steel cover and odorous air is removed via vents to the odour control unit.

The pumping station comprises of duty and standby fixed speed submersible pumps with non clogging/cutter type impellers suitable for raw sewage, located in a below ground concrete wet well.

Non return valves and isolating valves are located above the pumping station cover. The level in the RFPS is monitored by an ultrasonic level transmitter. The duty pump operation is controlled by the level within the pump station. These levels can be adjusted as necessary by the operator. The delivery from the Raw Feed Pumps is monitored by an electromagnetic flow meter

Inlet Screen

The Raw Feed Pumps deliver raw sewage to the inlet screen chamber that is located in a stainless steel tank above the Anoxic Tank. The inlet side of the chamber has a high level overflow weir that discharges to a hand rakes 6mm screen box that discharges to the downstream side of the screen. Downstream of the screen, the screened sewage discharges through a short pipe in to the Anoxic Tank.

The Rotary Micro- Strainer Inlet Screen is designed to remove solids above 2mm from the influent. As screenings are deposited upon the mesh, it becomes blinded, the influent level rises to overcome the 'dam' effect, depositing screening at a higher level. When the screen is operational, the rotation of the helical screw auger cleans the blinded mesh and lifts the screenings into the compacting and dewatering section of the screen. As the auger rotates the screenings are washed to return detritus material back into the process flow and the remains are then compacted. The compacted waste is ejected into a skip for removal from site.

When the level upstream of the screen is monitored as being above the Screen Start Level the PLC sets a start signal to operate the screen. When this condition is detected, the screen will operate in the Forward direction. The screen's spiral brushes will carry the screening up from the screen basket, clearing it and allowing the effluent to flow through

and hence the water level to drop. When the water level is monitored as being below the Screen Stop Level, the PLC will stop the screen.

To provide a positive wash water pressure to the screen, the Wash Water Booster Pump is requested to operate whenever the screen is required to operate and wash water is required to flow onto the screen.

Anoxic Tanks & Mixers

Screened sewage discharges into the anoxic tank from the inlet screen. GRP baffles will ensure plug flow through the tank. Two submersible propeller type mixers are installed. Outlet from the anoxic tank to the MBR Tank is through a distribution pipe set approximately 0.5m above the tank floor. Ferric Chloride is dosed into the Anoxic Tank to aid the precipitation of Phosphorous.

Both Anoxic Tank Mixers operate continuously to ensure that the contents of the Anoxic Tank are mixed prior to flowing into the MBR Tank via the distribution pipe work. The mixer operation is enabled once the level within the MBR Tank has reached the MBR Tank Low-Low Level Probe and the probe has been monitored as healthy for a preset time period. The time period is adjustable.

Both mixers will be stopped, should the level fall below the MBR Tank Low-Low Level probe.

Membrane Bio-Reactors

Screened sewage enters the MBR tank from the Anoxic Tank via a distribution header. The MBR tank contains 6 removable membrane modules. Each module contains 50 double-sided membrane plates through which clean water is drawn from the mixed liquors in the tank. Each membrane module has two air supply pipe connections and a clean water discharge pipe connection. Additionally, each membrane module's discharge connection is fitted manually operated vent and sample point valves.

A manual Slide Valve in the common permeate collection pipe is provided for setting the flow. A motorised fail safe modulating duty ball valve is provided in the common permeate collection pipe to protect the membranes in upset conditions. Air is supplied via header pipes from the two Roots type positive displacement rotary blowers, located in the blower building.

The design flow rate from each module is achieved with a differential head of 1.7 to 2.1m. A differential head of greater than 3.5m (between MBR tank and Permeate PS Levels) could damage the membranes. The mixed liquor within the MBR Tank is monitored for Dissolved Oxygen. Should the Dissolved Oxygen level fall below 8mg/l for longer than 15minutes, then an alarm will be raised on the HMI (Human Machine Interference).

Air Blowers

Two fixed speed duty/standby Air Blowers are installed to supply air to the aeration grids on each membrane module. The duty air blower operates continuously. Should the duty blower be monitored as failed and the PLC is requesting the duty blower to operate, then the standby blower will operate in place of the failed duty blower. A duty blower alarm will be raised on the HMI.

Permeate Pumping Station

The Permeate Pumping Station receives treated effluent from the MBR tank and lifts it to the outfall, via a flow meter and sample chamber. The pumping station comprises duty and standby fixed speed submersible Permeate Pumps, located in a below ground

concrete wet well. Non-return valves and isolating valves are located on a grating floor above the tank.

The Permeate Recycle Pump is also located in the Permeate Pumping Station and its purpose is to maintain a minimum flow through the membranes at times of low flow to the works. The pump is fixed speed submersible. Non-return and isolating valves are located on a grating floor above the tank. Delivery is to the inlet end of the anoxic tank.

Mixed Liquor Recycle Pumps

The Mixed Liquor Recycle Pumps return a constant stream of mixed liquors from the Membrane Bioreactor Tank to the Anoxic Tank in order to initiate the anoxic reaction with the incoming raw sewage. Additionally, the pumps are used to de-sludge the MBR tank via the activated Sludge Divert Valve.

The pumps will be fixed speed centrifugal, running as duty with recycle assist/standby. They will be dry well immersible (in order to resist flooding) located in a separate dry well. The pumps, when running, together will deliver 7.2 l/s. One pump alone will deliver approximately 5l/s.

Sludge Storage Tank

The Sludge Storage Tank is filled by pumping sludge via the Mixed Liquor Recycle Pumps and the Sludge Divert valve.

A pre-determined volume of mixed liquor is removed from the MBR Tank every day and held in the Sludge Storage Tank. The Sludge Storage volume of 33 cubic metres is sufficient for 14 days storage before needing to be emptied by tanker.

The tank is concrete covered with an inspection/access hatch and connection to the odour control system. Sludge is removed to Bandon WWTTP for treatment.

Ferric Chloride Dosing System

Ferric Chloride is dosed into the screened influent, as it flows into the Anoxic Tank, to cause precipitation of Phosphorous with the sludge.

The Ferric Chlorides dosing plant comprises a polypropylene Ferric Chloride storage IBC (capacity 100litres) with a positive displacement dosing pump with manually adjustable stroke to give variable discharge rate. The IBC will be located in a bund inside the control building.

The level in the Ferric Storage Tank is monitored by a low level float switch. If a low level condition is detected, an alarm is received in the HMI.

Odour Control

A packaged odour treatment unit provides odour control. The unit incorporates a fan that draws the odourous air from the Raw Feed Pumping Station, the Anoxic Tank and the sludge Storage Tank and passes this air through an odour removal filter before discharging the treated air to atmosphere.

Standby Generator

A diesel generator is provided to ensure that the treatment plant continues to operate during mains failure conditions. The generator is installed within an acoustic enclosure and interfaces directly with the MCC.

Human Machine Interference (HMI)

A Human Machine Interface (HMI) is provided on the front of the ICA Panel.

The HMI will provide the operator with the means to monitor, adjust and control the operation of the treatment plant. Colour screens will be provided to provide this interference.

C.1.1 Storm Water Overflows

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

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

C.1.1 Storm Water Overflows

Not Applicable

C.1.2 Pumping Stations

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

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

C.1.2 Pumping Stations

Not Applicable

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
	√	

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 discharges 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 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions' 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(i) 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 'Discharge Point Details', 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions', should be completed for the primary discharge point from the agglomeration and for **each** secondary discharge point, where relevant. Table 'Discharge Point Details' 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 waste water treatment plant this data should also be provided in response to Section D.1(i).

Supporting information should form **Attachment D.1(i)**

Attachment included	Yes	No
	√	

D.1(ii) Discharges to Groundwater

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 'Discharge Point Details', 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions', should be completed for the primary discharge point from the agglomeration and for **each** secondary discharge point, where relevant. Table 'Discharge Point Details' 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 waste water treatment plant this data should also be provided in response to Section D.1(ii).

Supporting information should form **Attachment D.1(ii)**

Attachment included	Yes	No
		√

D.1 (iii) Private Waste Water Treatment Plants

Provide information on all independently owned/operated private waste water treatment plants operating within the agglomeration. Submit a copy of the Section 4 discharge licence issued under the Water Pollution Acts 1977 to 1990, as amended for each discharge.

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
SW01 - HALF	Primary	Cork County Council	River	Owenboy	Moderate	160473	061305

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 'Discharge Point Details' 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 'Discharge Point Details' 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 monitoring.

The primary discharge point has composite sampling (time and flow proportional capabilities) and continuous flow monitoring is also provided. For the secondary discharge there is no continuous flow monitoring 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 discharge and its effect on the receiving environment should be considered.

The plant is currently being supervised by Bord Na Mona Environmental. Samples of the influent and effluent is taken on a weekly basis. Bord Na Mona mainly monitors the concentration of COD, BOD, SS, TP and pH. Examples of this influent and effluent testing can be found in Attachment E2.

The Cork County Council Environmental Laboratory does not carry out sampling of the influent and effluent at Halfway WWTP, nor is a sampling programme implemented on the Owenboy River. However for the purpose of his Waste Water Discharge Certificate Application, sampling was carried out on one occasion.

The Owenboy River flows into Cork Harbour. There are no public water abstraction points downstream of the primary discharge.

General Laboratory Information

The Waste Water 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 Waste Water 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 Waste Water 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	Primary	Sampling	160473	061305	y
aSW01u	u/s	Sampling	160453	061283	y
aSW01d	d/s	Sampling	160673	061272	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 24(i) of the Waste Water Discharge (Authorisation) Regulations 2007 requires all applicants in the case of an existing discharge 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 24(m) requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

Attachment E.4 should contain any supporting information.

Attachment included	Yes	No
	√	

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

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

Clear and concise 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) and/or the ambient environmental conditions of the groundwater upgradient and downgradient of any discharges.

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. Impact on Receiving Surface water or Groundwater

- Details of monitoring of the receiving surface water should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' 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 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details'. Monitoring of surface water shall be carried out at not less than two points, one upstream from the discharge location and one downstream.
- Details of monitoring of the receiving ground water should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed for the primary discharge point. Ground water monitoring locations upgradient and down gradient of the discharge point shall be screened for those substances listed in Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details'. Monitoring of ground water shall be carried out at not less than two points, one upgradient from the discharge location and one downgradient.
- For discharges from secondary discharge points Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed.
- 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 surface or groundwater.

- 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 drinking water abstraction points exist downstream/down gradient 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/EEC¹ in accordance with the procedures laid down in Article 21 of that Directive,
 - (c) a special area of conservation within the meaning of the Natural Habitats Regulations, or
 - (d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC²;
- ¹Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ No. L 206, 22.07.1992)
- ²Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (OJ No. L 103, 25.4.1979)
- This section should also contain details of any modelling of discharges from the agglomeration. 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 Halfway WWTP is the Owenboy River, which runs in a westerly direction for approximately 15km where it reaches Carrigaline and is tidally influenced by Cork Harbour.

Specific localised EPA flow data is not available in the vicinity of the existing discharge points and thus figures have been taken from available South Western River Basin District data.

These flow estimates including 95%ile and median flows are shown in the table below.

Table F1-1: Flow Data

Parameter	RBD Data obtained from Cork County Council
95%ile (m ³ /s)	0.2031
Median (m ³ /s)	1.2197

With an estimated 95-percentile flow (i.e. a flow that is exceeded 95% of the time) of 20.31l/sec, or 1,755m³/day, there are 83 dilutions available in the Owenboy River for the current discharge (approximately 21m³/day) while there are 18 dilutions available for the proposed maximum design discharge of 450 PE at 225l/h/d.

Water Quality Standards

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

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

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

- Promote sustainable water use

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

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

Designations under relevant directives

The Owenboy River is not a designated Shellfish area under the Shellfish Waters Regulations, S.I.268 of 2006. Corks Lower Harbour, into which the Owenboy River flows, is also not designated under these regulations.

The Owenboy River is not designated a Salmonid Water under Salmonid Water Regulations, S.I. 293 of 1988.

The Owenboy River is not designated a Bathing Water under the Bathing Water Regulations, S.I. 79 of 2008 as amended.

The Owenboy River is not a designated Sensitive Area under the Urban Waste Water Treatment Regulations 2001 (S.I. 254 of 2001). There is no sensitive area within 2km of any discharge point from Aghabullogue WWTP.

Areas of Conservation

Special Areas of Conservation

Natural Heritage Areas

There are no designated Natural Heritage Areas. However at Owenboy Creek there is a proposed Natural Heritage Area (pNHA). This sitecode is 001990.

Special Protected Areas

Halfway is not a designated Special Protected Area. However the Halfway WWTP discharges to the Owenboy River at Priest's Bridge (Discharge Grid Reference: 160473, 061305). The Owenboy River flows into Owenboy Creek and eventually reaches the estuary of Cork Harbour in Carrigaline approximately xxxkilometres away. This site at Owenboy Creek is designated a Special Protected Area. The SPA Site Code is 004030.

Receiving Water Quality Requirement

The Owenboy River system is covered in Hydrometric area no.19. A water quality report from the EPA and a status from the SWRBD project form Attachment F.1.

Effluent Standards

The standard water quality requirements for dangerous substances are based on the Water Quality (Dangerous Substances) Regulations 2006.

Hence, the principal receiving water quality requirements are given below:

Table F1-4: Receiving Water Quality Limiting Values

Parameter	Water Quality Standard (ug/l)
Atrazine	1.0
Dichloromethane	10.0
Simazine	1.0
Toluene	10.0
Tributyltin	0.001
Xylenes	10.0
Arsenic	25
Chromium	30
Copper	30
Cyanide	10
Fluoride	500
Lead	10
Nickel	50
Zinc	100

Effluent Standards

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

Table F1-5: Design Effluent Standards

Parameter	Effluent Standards (mg/l)	Actual Concentrations (mg/l)
Biological Oxygen Demand (BOD)	20	4.85
Chemical Oxygen Demand (COD)	125	18
Suspended Solids (SS)	30	8.5
Total Phosphorus	Not Applicable	2.16

*Actual Concentration is the average effluent concentrations recorded at the outlet of the WWTP by Bord Na Mona during the period January '09 to August '09.

From Table F1-5 above, it is evident that treated effluent from the Halfway wastewater treatment plant is compliant with the quality of design effluent standards set out.

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

There are no emissions to ground at the works.

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. This programme measured the levels in the discharge from the WWTP and measured river levels (upstream and downstream of the primary discharge point) on the Owenboy River also. The results of this analysis forms Attachment E.4.

It is evident that all parameters measured downstream were found to be below levels required by the Dangerous Substances Regulations.

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., Giardia, in the receiving water environment.

No water abstraction points exist downstream

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 on a Natural Heritage Area, site of community importance under the habitats directive, special area of conservation or a site classified under the conservation of wild birds directive.

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 ID's	Distance Downstream in meters from Emission Point to Abstraction Point	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

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

There are no water abstraction points downstream of the Halfway discharge.

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.

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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 (2006/113/EC).

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.

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 required by the Regulations.

The plant is operating satisfactory at present and is operating within the requirements of the relevant legislation, outlined above.

Water Framework Directive 2000/60/EC

The Owenboy River has been determined to have a high Status under the Water Framework Directive. The data in the assimilative capacity in Section F1 confirms the wastewater discharge has little effect on the overall river quality given adequate flow in the river and dispersion time.

Birds Directive 79/409/EEC

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

No designated special protected areas are located along the Owenboy River. However in Carrigaline, from the point where the Owenboy River is tidally influenced by Cork Harbour it is deemed an SPA Site, 'Cork Harbour SPA'. The SPA Site Code is 004030. This location is approximately 15km downstream of the discharge point.

Groundwater Directives 2006/118/EC

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

There is no public groundwater source in the area or downstream of the treatment plant.

Drinking Water Directives 80/778/EEC

There are no water abstractions from the Owenboy River downstream of Halfway WWTP.

Urban Waste Water Treatment Directive 91/271/EEC

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

The Regulations require that waste water 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 of the Directive and of other community Directives”

The Halfway Wastewater Treatment Plant was commissioned in 2005 and was designed to treat effluent to a 20/30ppm standard. These standards have been adopted to ensure compliance with the requirements of the Waste Water Treatment Regulations (S.I. 254 of 2001) as set out above.

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

Table G1-1: Minimum Effluent Standards based on SI 254 of 2001

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

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

Article 4(2)(a) states that all discharges into Sensitive Areas require more stringent treatment than secondary treatment. The Owenboy River is not a designated Sensitive Area.

Shellfish Directive 2006/113/EC

The Owenboy River is not a designated Shellfish Area under the Shellfish Waters Regulations, S.I. 268 of 2006.

Habitats Directive 92/43/EEC

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

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

No designated natural habitat areas are located along the Owenboy River. However in Carrigaline, from the point where the Owenboy River is tidally influenced by Cork Harbour there is a proposed Natural Heritage Area (pNHA). The SPA Site Code is 001990. This location is approximately 15km downstream of the discharge point.

Environmental Liabilities Directive 2004/35/EC

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

Bord Na Mona, who operate and maintain the plant, carry out monitoring of the effluent from the waste water treatment plant on a daily basis via a 24hour composite sampler.

Bathing Water Directive 76/160/EEC

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

Dangerous Substances Directive 2006/11/EC

The level of dangerous substances in the effluent discharged from Halfway wastewater treatment plant is lower than the concentration limits set in the directive.

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

Attachment included	Yes	No
		√

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

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

Receiving Water Quality Requirement based on Phosphorus Regulations 2008

Halfway has a Membrane Bio Reactor (MBR) Plant to treat waste water. In the treatment process, prior to waste water entering the MBR tank screened influent is mixed in the anoxic tank. At this stage ferric chloride is dosed into the anoxic tank to aid the precipitation of phosphorous. The Ferric Chlorides dosing plant comprises a polypropylene Ferric Chloride storage IBC (capacity 100litres) with a positive displacement dosing pump with manually adjustable stroke to give variable discharge rate. The IBC is located in a bund inside the control building.

The level in the Ferric Storage Tank is monitored by a low level float switch. If a low level condition is detected, an alarm is received in the HMI.

Initial licence issued to the plant by Cork County Council limited to Total Phosphorous (Tp) levels at 1mg/l.

Effluent Standards

The treated effluent quality requirements are determined with respect to the EC Urban Waste Water Directive, given effect in Irish Law by S.I.254 of 2001. The waste water treatment processes should reduce nutrients in the final effluent. The minimum effluent standard based on S.I.254 of 2001 for Phosphorus in waste water effluent is 2mg/l. Licence granted for the running of Halfway Waste Water Treatment Plant has a standard of 1mg/l.

It is evident from Tables G2-1 & G2-2 that there is a reduction in Total Phosphorous levels from the influent and effluent. This can be attributed to the uptake in phosphorous as a result of secondary treatment at the plant, but also due to the addition of Ferric Chloride in the Anoxic Tanks at Halfway.

Table G2-1: Phosphorus Levels in Influent to WWTP

Parameter	Inlet Monitoring Station
	Bord Na Mona Average Jan – Aug 09
Total-Phosphorus mg/l	11.99

Table G2-2: Phosphorus Levels in Effluent from WWTP

Parameter	Outlet Monitoring Station
	Bord Na Mona Average Jan – Aug 09
Total-Phosphorus mg/l	2.16

The results of samples in March gave a Tp result of 4.99 driving up the average from January to August, 2009 to 2.16mg/L. Remedial measures were taken to rectify

problems identified and the trend in recent months show a compliant level with licence limit for Tp being achieved.

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.

Not Applicable

Halfway WWTP was built in 2005 using the most up to date treatment techniques which have been described in Section C. Bord Na Mona operate and maintain the plant to the required standards on behalf of Cork County Council and to date this has been carried out successfully. At present there is no need for improvements to the plant.

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

Attachment included	Yes	No
		√

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G.4 Storm Water Overflows

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.

Not Applicable

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

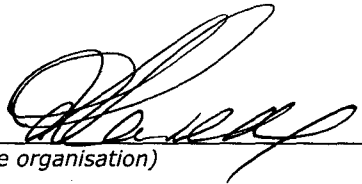
Declaration

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

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

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

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

Signed by : 
(on behalf of the organisation)

Date : 17th Dec 09

Print signature name: P Power

Position in organisation: Director of Services

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Attachments Table of Contents:

Attachment	Description
A1 Map 1	1:25,000 Location Map
A1 Map 2	Location of WWTP
A1 Map 3	Site Layout
B1 Map 4	Agglomeration Boundary
B2 Map 5	Location of WWTP
B3 Map 6	Location of Primary Discharge Point
B4	Not Applicable
B5	Not Applicable
B6	Part 8 Planning
B7	Not Applicable
B8	Fee - Letter
B9	Not Applicable
B10	Not Applicable
B11	Not Applicable
C1 Dwg 1	WWTP Plan
C1 Dwg 2	Schematic Showing Treatment Plant Process
D1	Monitoring Information on Influent Samples
D2	Discharge Point
E2	Details of Sampling results from Response Engineering
E2	Details of Accreditation or Certification of Analysis
E3	Monitoring & Sampling Points
E4	Sampling Data
F1	SWRBD Status Report
F1	Existing Environment
F2	Not Applicable
G1	Not Applicable
G2	Not Applicable
G3	Not Applicable
G4	Not Applicable
Online Data	Online Data submitted to the EPA including Annex

WWD Licence Application

Agglomeration details

Leading Local Authority	Cork County Council
Co-Applicants	
Agglomeration	Halfway
Population Equivalent	230
Level of Treatment	Secondary
Treatment plant address	Waste Water Treatment Plant An Bruach Ballyhooleen Halfway Cork
Grid Ref (12 digits, 6E, 6N)	160474 / 061310 (Verified using GPS)
EPA Reference No:	

Contact details

Contact Name:	Patricia Power
Contact Address:	Water Services Section Cork County Council Southern Division Carrigrohane Road Cork
Contact Number:	021-4276891
Contact Fax:	021-4276321
Contact Email:	patricia.power@corkcoco.ie

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Table D.1(i)(a): EMISSIONS TO SURFACE/GROUND WATERS (Primary Discharge Point)

Discharge Point Code: SW-1

Local Authority Ref No:	BOL/HALF/1209	
Source of Emission:	Treated Effluent from WWTP	
Location:	Ballyhooleen, Halfway	
Grid Ref (12 digits, 6E, 6N)	160473 / 061305 (Verified using GPS)	
Name of Receiving waters:	Owenboy	
Water Body:	River Water Body	
River Basin District	South Western RBD	
Designation of Receiving Waters:	Moderate	
Flow Rate in Receiving Waters:	0	m ³ .sec ⁻¹ Dry Weather Flow
	0.2031	m ³ .sec ⁻¹ 95% Weather Flow
Additional Comments (e.g. commentary on zero flow or other information deemed of value)	information not available	

Emission Details:

(i) Volume emitted			
Normal/day	21 m ³	Maximum/day	101 m ³
Maximum rate/hour	5 m ³	Period of emission (avg)	60 min/hr 24 hr/day 365 day/yr
Dry Weather Flow	0.00024 m ³ /sec		

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Table D.1(i)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of The Emission (Primary Discharge Point)

Discharge Point Code: SW-1

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
pH	pH	Grab	= 9	
Temperature	°C	Grab	= 25	
Electrical Conductivity (@ 25°C)	µS/cm	Grab	= 1000	
Suspended Solids	mg/l	Grab	= 35	3.535
Ammonia (as N)	mg/l	Grab	= 5	0.505
Biochemical Oxygen Demand	mg/l	Grab	= 25	2.525
Chemical Oxygen Demand	mg/l	Grab	= 125	12.625
Total Nitrogen (as N)	mg/l	Grab	= 0	0
Nitrite (as N)	mg/l	Grab	= 0	0
Nitrate (as N)	mg/l	Grab	= 0	0
Total Phosphorous (as P)	mg/l	Grab	= 4	0.404
OrthoPhosphate (as P)	mg/l	Grab	= 3	0.303
Sulphate (SO ₄)	mg/l	Grab	= 0	0
Phenols (Sum)	µg/l	Grab	= 0	0

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
 For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

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Table D.1(i)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of The Emission (Primary Discharge Point)

Discharge Point Code: SW-1

Substance	As discharged			kg/day
	Unit of Measurement	Sampling Method	Max Daily Avg.	
Atrazine	µg/l	Grab	= 0	0
Dichloromethane	µg/l	Grab	= 0	0
Simazine	µg/l	Grab	= 0	0
Toluene	µg/l	Grab	= 0	0
Tributyltin	µg/l	Grab	= 0	0
Xylenes	µg/l	Grab	= 0	0
Arsenic	µg/l	Grab	= 0	0
Chromium	µg/l	Grab	= 0	0
Copper	µg/l	Grab	= 0	0
Cyanide	µg/l	Grab	= 0	0
Flouride	µg/l	Grab	= 0	0
Lead	µg/l	Grab	= 0	0
Nickel	µg/l	Grab	= 0	0
Zinc	µg/l	Grab	= 0	0
Boron	µg/l	Grab	= 0	0
Cadmium	µg/l	Grab	= 0	0
Mercury	µg/l	Grab	= 0	0
Selenium	µg/l	Grab	= 0	0
Barium	µg/l	Grab	= 0	0

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
 For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

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TABLE E.1(i): WASTE WATER FREQUENCY AND QUANTITY OF DISCHARGE – Primary and Secondary Discharge Points

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m ³ /annum)
SW-1	365	7665

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TABLE E.1(ii): WASTE WATER FREQUENCY AND QUANTITY OF DISCHARGE – Storm Water Overflows

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m ³ /annum)	Complies with Definition of Storm Water Overflow
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TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1d
Grid Ref (12 digits, 6E, 6N)	160673 / 061272

Parameter	Results (mg/l)			Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	18/11/09				
pH		= 7.3		Grab	2	Electrochemical
Temperature	= 0			Grab	0.5	Electrochemical
Electrical Conductivity (@ 25°C)		= 162		Grab	0.5	Electrochemical
Suspended Solids		= 25		Grab	0.5	Gravimetric
Ammonia (as N)		< 0.1		Grab	0.02	Colorimetric
Biochemical Oxygen Demand		= 2		Grab	0.06	Electrochemical
Chemical Oxygen Demand		< 21		Grab	8	Digestion & Colorimetric
Dissolved Oxygen	= 0			Grab	0.2	ISE
Hardness (as CaCO ₃)	= 0			Grab	1	Titrimetric
Total Nitrogen (as N)		= 4.2		Grab	0.5	Digestion & Colorimetric
Nitrite (as N)		< 0.1		Grab	0.1	Colorimetric
Nitrate (as N)		= 2.57		Grab	0.5	Colorimetric
Total Phosphorous (as P)		= 0.145		Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)		= 0.09		Grab	0.02	Colorimetric
Sulphate (SO ₄)		< 30		Grab	30	Turbidimetric
Phenols (Sum)	= 0			Grab	0.1	GC-MS2

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For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
 For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Additional Comments:	Default 01/01/09 and 0 where results are not available.
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TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1d
Grid Ref (12 digits, 6E, 6N)	160673 / 061272

Parameter	Results (µg/l)			Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	18/11/09				
Atrazine		< 0.01		Grab	0.96	HPLC
Dichloromethane		< 1		Grab	1	GC-MS1
Simazine		< 0.01		Grab	0.01	HPLC
Toluene		< 0.28		Grab	0.02	GC-MS1
Tributyltin	= 0			Grab	0.02	GC-MS1
Xylenes		< 1		Grab	1	GC-MS1
Arsenic		= 0.4		Grab	0.96	ICP-MS
Chromium		< 20		Grab	20	ICP-OES
Copper		< 20		Grab	20	ICP-OES
Cyanide		< 5		Grab	5	Colorimetric
Flouride		= 68		Grab	100	ISE
Lead		< 20		Grab	20	ICP-OES
Nickel		< 20		Grab	20	ICP-OES
Zinc		< 20		Grab	20	ICP-OES
Boron		< 20		Grab	20	ICP-OES
Cadmium		< 20		Grab	20	ICP-OES
Mercury		< 0.03		Grab	0.2	ICP-MS
Selenium		= 1		Grab	0.74	ICP-MS
Barium		< 20		Grab	20	ICP-OES

Additional Comments:	TBT value is 0.02ug/l as Sn Default of 01/01/09 and 0 where results are not available, TBT testing not required
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TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1u
Grid Ref (12 digits, 6E, 6N)	160453 / 061283

Parameter	Results (mg/l)			Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	18/11/09				
pH		= 7.3		Grab	2	Electrochemical
Temperature	= 0			Grab	0.5	Electrochemical
Electrical Conductivity (@ 25°C)		= 162		Grab	0.5	Electrochemical
Suspended Solids		= 28		Grab	0.5	Gravimetric
Ammonia (as N)		= 0.1		Grab	0.02	Colorimetric
Biochemical Oxygen Demand		= 2		Grab	0.06	Electrochemical
Chemical Oxygen Demand		< 21		Grab	8	Digestion & Colorimetric
Dissolved Oxygen	= 0			Grab	0.2	ISE
Hardness (as CaCO ₃)	= 0			Grab	1	Titrimetric
Total Nitrogen (as N)		= 4.14		Grab	0.5	Digestion & Colorimetric
Nitrite (as N)		< 0.1		Grab	0.1	Colorimetric
Nitrate (as N)		= 2.6		Grab	0.5	Colorimetric
Total Phosphorous (as P)		= 0.104		Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)		= 0.11		Grab	0.02	Colorimetric
Sulphate (SO ₄)		< 30		Grab	30	Turbidimetric
Phenols (Sum)	= 0			Grab	0.1	GC-MS2

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
 For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Additional Comments:	Default of 01/01/09 and 0 where results are not available.
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TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1u
Grid Ref (12 digits, 6E, 6N)	160453 / 061283

Parameter	Results (µg/l)			Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	18/11/09				
Atrazine	= 0			Grab	0.96	HPLC
Dichloromethane	= 0			Grab	1	GC-MS1
Simazine	= 0			Grab	0.01	HPLC
Toluene	= 0			Grab	0.02	GC-MS1
Tributyltin	= 0			Grab	0.02	GC-MS1
Xylenes	= 0			Grab	1	GC-MS1
Arsenic	= 0			Grab	0.96	ICP-MS
Chromium		< 20		Grab	20	ICP-OES
Copper		< 20		Grab	20	ICP-OES
Cyanide	= 0			Grab	5	Colorimetric
Flouride		= 74		Grab	100	ISE
Lead		< 20		Grab	20	ICP-OES
Nickel		< 20		Grab	20	ICP-OES
Zinc		< 20		Grab	20	ICP-OES
Boron		< 20		Grab	20	ICP-OES
Cadmium		< 20		Grab	20	ICP-OES
Mercury	= 0			Grab	0.2	ICP-MS
Selenium	= 0			Grab	0.74	ICP-MS
Barium		< 20		Grab	20	ICP-OES

Additional Comments:	TBT value is 0.02ug/l as Sn Default of 01/01/09 and 0 where results are not available, TBT testing not required
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Annex 2: Check List For Regulation 16 Compliance

Regulation 16 of the waste water discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007) sets out the information which must, in all cases, accompany a discharge licence application. In order to ensure that the application fully complies with the legal requirements of regulation 16 of the 2007 Regulations, all applicants should complete the following.

In each case, refer to the attachment number(s), of your application which contains(s) the information requested in the appropriate sub-article.

Regulation 16(1) In the case of an application for a waste water discharge licence, the application shall -		Attachment Number	Checked by Applicant
(a)	give the name, address, telefax number (if any) and telephone number of the applicant (and, if different, of the operator of any treatment plant concerned) and the address to which correspondence relating to the application should be sent and, if the operator is a body corporate, the address of its registered office or principal office,		Yes
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,		Yes
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the waste water treatment plant and/or the waste water discharge point or points to which the application relates,		Yes
(d)	state the population equivalent of the agglomeration to which the application relates,		Yes
(e)	specify the content and extent of the waste water discharge, the level of treatment provided, if any, and the flow and type of discharge,		Yes
(f)	give details of the receiving water body, including its protected area status, if any, and details of any sensitive areas or protected areas or both in the vicinity of the discharge point or points likely to be affected by the discharge concerned, and for discharges to ground provide details of groundwater protection schemes in place for the receiving water body and all associated hydrogeological and geological assessments related to the receiving water environment in the vicinity of the discharge.		Yes
(g)	identify monitoring and sampling points and indicate proposed arrangements for the monitoring of discharges and, if Regulation 17 does not apply, provide details of the likely environmental consequences of any such discharges,		Yes
(h)	in the case of an existing waste water treatment plant, specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application,		Yes
(i)	describe the existing or proposed measures, including emergency procedures, to prevent unintended waste water discharges and to minimise the impact on the environment of any such discharges,		Yes
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,		Yes
(k)	give details, and an assessment of the effects, of any existing or proposed emissions on the environment, including any environmental medium other than those into which the emissions are, or are to be made, and of proposed measures to prevent or eliminate or, where that is not practicable, to limit any pollution caused in such discharges,		Yes
(l)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,		Yes
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.		Yes
(n)	Any other information as may be stipulated by the Agency.		Yes
Regulation 16(3) Without prejudice to Regulation 16 (1) and (2), an application for a licence shall be accompanied by -		Attachment Number	Checked by Applicant
(a)	a copy of the notice of intention to make an application given pursuant to Regulation 9,		Yes
(b)	where appropriate, a copy of the notice given to a relevant water services authority under Regulation 13,		Yes
(c)	Such other particulars, drawings, maps, reports and supporting documentation as are necessary to identify and describe, as appropriate -		Yes
(c) (i)	the point or points, including storm water overflows, from which a discharge or discharges take place or are to take place, and		Yes
(c) (ii)	the point or points at which monitoring and sampling are undertaken or are to be undertaken,		Yes
(d)	such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		Yes

WWD Licence Application Annex II

Regulation 16(4) An original application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under Regulation 16(3) in hardcopy or in an electronic or other format as specified by the Agency.		Attachment Number	Checked by Applicant
1	An Original Application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under regulation 16(3) in hardcopy or in electronic or other format as specified by the agency.		Yes
Regulation 16(5) For the purpose of paragraph (4), all or part of the 2 copies of the said application and associated documents and particulars may, with the agreement of the Agency, be submitted in an electronic or other format specified by the Agency.		Attachment Number	Checked by Applicant
1	Signed original.		Yes
2	2 hardcopies of application provided or 2 CD versions of application (PDF files) provided.		Yes
3	1 CD of geo-referenced digital files provided.		Yes
Regulation 17 Where a treatment plant associated with the relevant waste water works is or has been subject to the European Communities (Environmental Impact Assessment) Regulations 1989 to 2001, in addition to compliance with the requirements of Regulation 16, an application in respect of the relevant discharge shall be accompanied by a copy of an environmental impact statement and approval in accordance with the Act of 2000 in respect of the said development and may be submitted in an electronic or other format specified by the Agency		Attachment Number	Checked by Applicant
3	2 CD versions of EIS, as PDF files, provided.		Yes
1	EIA provided if applicable		Yes
2	2 hardcopies of EIS provided if applicable.		Yes
Regulation 24 In the case of an application for a waste water discharge certificate of authorisation, the application shall –		Attachment Number	Checked by Applicant
(a)	give the name, address, telefax number (if any) and telephone number of the applicant and the address to which correspondence relating to the application should be sent and, if the operator of the waste water works is a body corporate, the address of its registered office or principal office		Yes
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,		Yes
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the discharge point or points to which the application relates,		Yes
(d)	state the population equivalent of the agglomeration to which the application relates,		Yes
(e)	in the case of an application for the review of a certificate, specify the reference number given to the relevant certificate in the register,		Yes
(f)	specify the content and extent of the waste water discharge, the level of treatment provided and the flow and type of discharge,		Yes
(g)	give details of the receiving water body, its protected area status, if any, and details of any sensitive areas or protected areas, or both, in the vicinity of the discharge point or points or likely to be affected by the discharge concerned,		Yes
(h)	identify monitoring and sampling points and indicate proposed arrangements for the monitoring of discharges and of the likely environmental consequences of any such discharges,		Yes
(i)	in the case of an existing discharge, specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application,		Yes
(j)	describe the existing or proposed measures, including emergency procedures, to prevent unauthorised or unexpected waste water discharges and to minimise the impact on the environment of any such discharges,		Yes
(k)	give particulars of the location of the nearest downstream drinking water abstraction point or points to the discharge point or points associated with the waste water works,		Yes
(l)	give details of any designation under any Council Directive or Regulations that apply in relation to the receiving waters,		Yes
(m)	give details of compliance with any applicable monitoring requirements and treatment standards,		Yes
(n)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work,		Yes
(o)	give any other information as may be stipulated by the Agency, and		Yes
(p)	be accompanied by such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		Yes