CORK COUNTY COUNCIL

WESTERN DIVISION

WATER SERVICES

Courthouse, Skibbereen, Co. Cork

APPLICATION FOR WASTE

WATER DISCHARGE CERTIFICATE

KEALKILL, CO. CORK.

Application Form
22nd December 2009

CORK COUNTY COUNCIL

WESTERN DIVISION

WATER SERVICES

Courthouse, Skibbereen, Co. Cork

Re: Waste Water Discharge Certificate Application for the Agglomeration of Kealkill

Dear Sir/Madam,

Please find enclosed Cork County Council's Waste Water Discharge Certificate Application for the agglomeration of Kealkill.

The following documentation is enclosed:

- 1 Nr. Signed original in hardcopy
- 1 Nr. Copy in hardcopy
- 2 Nr. CD-ROM with all documentation in electronic searchable PDF (OCR'd format)
- 1 Nr. CD-ROM with GIS Data, Tabular Data

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

Niall O'Mahony,
Senior Engineer.

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 • Faics: (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,

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

Recycled

This is a draft document and is subject to revision.

Waste Water Discharge Certificate of Authorisation Application Form

EPA Ref. Nº: *(Office use only)*	

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

Tracking Amendments to Draft Application Form

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

Environmental Protection Agency

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

CONTENTS

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. <u>The abbreviation "N/A" should not be used</u>.

Additional information may need to be submitted beyond that which is explicitly requested on this form. Any references made should be supported by a bibliography. The Agency may request further information (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.

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.

Kealkill is a small settlement about 10km north-east of Bantry. The settlement lies at the junction of two important regional roads, the R584 and R585.

Existing Collection System

The sewerage scheme in Kealkill was constructed in the early 1980's to serve the Eastern portion of the village. Treatment was through a septic tank with an outfall to the Owvane River. In the mid 1980's the collection network was extended past Inchingearagh Bridge to include the western portion of the village. The original collection network was intercepted at the cross roads on the R585 and connected into the new network which flows to the oxidation ditch plant west of the village. Part of the original Eastern collection system is not connected to the main collection system and continues to discharge to the septic tank.

Existing Waste Water Treatment Works

There are currently two separate networks discharging to two facilities in Kealkill. An oxidation ditch located to the West of the village near the Owvane River serves 76 houses within the development boundary and 6 houses outside the development boundary. A septic tank serves a small number of properties to the North West of the village adjacent to the R584 to Macroom.

Oxidation Ditch
The wastewater treatment site to the west of the village comprises of an oxidation ditch unit which is 18.0m long, 3.6m wide and 1.6m deep and has a separator wall running down the middle. On one side of the separator wall is a settlement compartment facilitating decanting of clarified liquid. The total active volume of the oxidation ditch is approximately 109m^3. The treatment capacity of the oxidation is 273 PE based on a minimum values for f/m ratio of 0.05 and MLSS of 3000mg/l. Currently the oxidation is treating a PE of 246. The oxidation ditch has one brush type aerator.

Septic Tank
The total active volume of the septic tank is in the region of 9m^3. At present, the septic tank serves a PE of 25.

According to BS 6297 the capacity of the septic tank can cater for a PE of 39.

The septic tank provides primary settlement only, which according to the National Urban Waste Water Study (NUWWS) reduces the BOD load by approximately 30% and the suspended solids load by approximately 50%.

The source of Emissions for the Wastewater Works
The sources of emissions from the Kealkill agglomeration are considered domestic. An oxidation ditch located to the West of the village near the Owvane River serves 76 houses within the development boundary and 6 houses outside the development boundary, PE of 246. A septic tank serves a small number of properties (PE 25) to the North West of the village adjacent to the R584 to Macroom.

The nature and quantities of foreseeable emissions from the wastewater works into the receiving aqueous environment as well as identification of significant effects of the emission to the environment
The sources of emissions from the Kealkill agglomeration are considered domestic. There has been a small growth in population between the 2002 and 2006.

The existing outfall discharges effluent to the River Owvane adjacent to Kealkill Waste Water Treatment Plant. The outfall is a 225mm dia concrete pipe. The effluent under-goes secondary treatment prior to being discharged to the River. That section of the River Owvane is not designated as a Natural Heritage Area, a Special Area of Conservation, a Proposed Natural Heritage Area or a Special Protected Area.

Recent sampling results give an average BOD on the effluent from the plant of 34 mg/l resulting in river BOD of 1.47 mg/l for 95%ile flow. This is below the 2.2 mg/l limit for High Status Waters in the Draft Water Quality Regulations.

The proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the wastewater works
Regular desludging of the treatment plants and septic tanks are being carried out to ensure proper operation. We will be seeking funding during the licence period to increase the capacity of the treatment plant.

Further measures planned to comply with the general principle of the basic obligations of the operator i.e. that no significant pollution is caused
Regular desludging of the treatment plants and septic tanks are carried out to ensure proper operation. We will be seeking funding during the licence period to increase the capacity of the treatment plant.

At present all wastewater treatment plants and septic tanks under the control of Cork County Council are monitored and maintained by full time Cork County Council personnel and are desludged as required, thus reducing the possibility of significant pollution.

Measures planned to monitor emission into the environment
The emissions from the primary discharge point can be monitored through the sampling point SW01 KEAL. At present we were unable to take a sample from the secondary discharge point.

It is proposed to sample once yearly the influent to and effluent from the oxidation ditch & septic tank as well as the primary and secondary discharge points.

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

SECTION B: GENERAL

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

B.1 Agglomeration Details

Name of Agglomeration:	Kealkill

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:	Water Services (Western Division)
	Courthouse
	Skibbereen
	Co. Cork
Tel:	028-21299
Fax:	028-21995
e-mail:	niall.omahony@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*:	Niall O'Mahony
Address:	Cork County Council
	Courthouse
	Skibbereen
	Co. Cork
Tel:	028-21299
Fax:	028-21995
e-mail:	niall.omahony@corkcoco.ie

*This should be the name of person nominated by the Water Services Authority for the purposes of the application.

Co-Applicant's Details

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

*This should be the name of a Water Services Authority, other than the lead authority, where multiple authorities are the subject of a waste water discharge Certificate of Authorisation application.

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

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

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

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

Name*:	Ruth O'Brien
Address:	Bantry Area Office
	The Square
	Bantry
	Co. Cork
Grid ref (6E, 6N)	E: 103946 N: 055892
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 (≤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 – Owvane River
Type of Discharge	Discharge Pipe
Unique Point Code	SW01 Keal
Location	River Owvane, Kealkill
Grid ref (6E, 6N)	E: 103923 N: 055885

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

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

B.4 Location of Secondary Discharge Point(s)

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

Discharge to	Surface Water – Tributary of the Owvane River
Type of Discharge	Discharge Pipe
Unique Point Code	SW02 Keal
Location	Stream
Grid ref (6E, 6N)	E: 104570 N: 056206

***Where a septic tank is in existence simultaneous to a package plant within an agglomeration, discharges from the septic tank shall be considered as a secondary discharge.

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

Attachment included	Yes	No
	√	

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

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

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

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

Attachment included	Yes	No
		√

B.6 Planning Authority

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

Name:	Cork County Council
Address:	Planning Department
	Norton House
	Skibbereen
	Co. Cork
Tel:	028-40340
Fax:	028-21660
e-mail:	

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

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

Local Authority Planning File Reference Nº:	

* The waste water works was constructed Pre 1995 therefore the development is exempt from planning.

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
Address:	Area Headquarters
	Hospital Grounds
	Skibbereen
Tel:	028-40400
Fax:	028-21006
e-mail:	info@hse.ie

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.

Existing

Population Equivalent	**271**
Data Compiled (Year)	**2009**
Method	**House Count**

Proposed

Population Equivalent	**450**
Data Compiled (Year)	**2009**
Method	**House Count, Desk study, Planning + Future Zoning**

For the purposes of this application the relevant PE chosen for the licence period is 450 being the peak PE estimated at end of that period.

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.

There is one significant development proposed and a number of one off housing developments proposed for Kealkill that have received planning permission and are yet to be constructed. The significant development is a residential development comprising of 18nr of houses (07-795). A total of 5nr (08-2117, 08-1331) of one off dwellings are also proposed.

It is considered that all additional PE from pending developments are from domestic activities.

The existing oxidation ditch is capable of treating an effluent generated by a population of 273. At present it is treating a PE of 246. Therefore the plant can cater for an addition pe of 27.

1. Calculated pe of planning permissions granted = 69

2. Percentage of projected pe contributed by non-domestic = 0

3. Ability of waste water works to accommodate extra loading: The likelihood of such development going ahead during this period of economic uncertainty is small. The oxidation ditch can however accommodate an extra loading of 27 PE. We will however be seeking funding during the licence period to increase the capacity of the treatment plant.

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 €)
PE < 500	3000

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 small schemes programme) 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.

We will be seeking funding during the licence period to increase the capacity of the treatment plant.

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.

No section 63 notice has been issued in relation to the waste water works.

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**
		√

SECTION C: INFRASTRUCTURE & OPERATION

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

C.1 Operational Information Requirements

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

C.1.1 Storm Water Overflows

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

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

C.1.2 Pumping Stations

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

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

Description of the existing plant process and design capacity:

Existing Collection System

The sewerage scheme in Kealkill was constructed in the early 1980's to serve the Eastern portion of the village. Treatment was through a septic tank with an outfall to the Owvane River. In the mid 1980's the collection network was extended past Inchingearagh Bridge to include the western portion of the village. The original collection network was intercepted at he cross roads on the R585 and connected into the new network which flows to the oxidation ditch west of the village. Part of the original Eastern collection system is not connected to the main collection system and continues to discharge to the septic tank.

Existing Waste Water Treatment Works

There are currently two separate networks discharging to two facilities in Kealkill. An oxidation ditch located to the West of the village near the Owvane River serves 76 houses within the development boundary and 6 houses outside the development boundary. A septic tank serves a small number of properties to the North West of the village adjacent to the R584 to Macroom.

Oxidation Ditch
The wastewater treatment site to the west of the village comprises of an oxidation ditch unit which is 18.0m long, 3.6m wide and 1.6m deep and has a separator wall running down the middle. On one side of the separator wall is a settlement compartment facilitating decanting of clarified liquid. The total active volume of the oxidation ditch is approximately 109m^3. The treatment capacity of the oxidation is 273 PE based on a minimum values for f/m ratio of 0.05 and MLSS of 3000mg/l. The oxidation ditch has one brush type aerator.

Septic Tank
The total active volume of the septic tank is in the region of 9m^3. It can cater for a PE of 40. At present, the septic tank serves a PE of 25.

According to BS 6297 the capacity of the septic tank can cater for a PE of 39.

The septic tank provides primary settlement only, which according to the National Urban Waste Water Study (NUWWS) reduces the BOD load by approximately 30% and the suspended solids load by approximately 50%.

Stormwater Overflows:
There are no stormwater overflows associated to this sewerage scheme.

Pumping Stations:
There is no pumping involved in the existing sewerage scheme

Frequency & duration of activation of storm overflow to receiving waters:
Not applicable

Location of discharge entering the receiving waters:
The primary discharge from the oxidation ditch and the secondary discharge from the septic tank enters surface water of the Owvane River and a tributary of the Owvane River respectively via discharge pipes, the locations of which are shown on Drawing No KEAL B3-01 & Drawing No KEAL B4-01.

Table C.1.1: Details of Existing Discharging Outfalls

Discharge	Reference	Location	Design Criteria	Construction Details
Primary	SW01 KEAL	E: 103923 N: 055885	Discharge Pipe	225mm Discharge Pipe
Secondary	SW02 KEAL	E: 104570 N: 056206	Discharge Pipe	225mm Discharge Pipe

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).

Find details of all discharges of waste water from the agglomeration in the attached tables.

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).

There are no discharges of waste water to groundwater from the agglomeration.

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.

There are no independently owned/operated private waste water treatment plants operating within the agglomeration.

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 KEAL	Primary	Cork County Council	River	River Owvane	None	E: 103923	N: 055885
SW02 KEAL	Secondary	Cork County Council	Tributary of River	River Owvane	None	E: 104570	N: 056206

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.

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.

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
SW 01 KEAL	Primary	S	103923	055885	N
aSW-1 u/s	Upstream	S	104825	56567	N
aSw-1 d/s	Downstream	S	102390	54499	N

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
	√	

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.

Find details of monitoring of the receiving surface water attached tables via the web based link.

- 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.

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

- 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.

Find details of monitoring for discharges from secondary discharge points in attached tables via the web based link.

- 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.

The discharge from the Wastewater treatment plant in Kealkill is not within any designated sensitive area under the Urban Wastewater Treatment Regulations 2001. Neither is it located within a European designated site.

a) Mass Balance Equation for Orthophosphate

Median flow of River = 1.4620 m3/sec
Median oPO4-P in River (upstream) = 0.05mg/l

Average volume of Discharge = 0.003 m3/sec
Median value of oPO4-P in discharge = 0.88mg/l

$$C_{final} = \frac{(1.4620 \times 0.05) + (0.003 \times 0.88)}{1.4620+0.003}$$

Cfinal = 0.052 mg/l oPO4-P

The increase in Orthophosphate due to the discharge of Kealkill WWTP is 2µg/l

b) Mass Balance Equation for BOD

Flow of River (95%) = 0.2057 m3/sec
Average BOD in River (upstream) = 1mg/l

Average volume of Discharge = 0.003 m3/sec
Average BOD in Discharge = 34 mg/l

$$C_{final} = \frac{(0.2057 \times 1) + (0.003 \times 34)}{0.2057+0.003}$$

Cfinal = 1.47 mg/l BOD

The increase in BOD due to the discharge of Kealkill WWTP is 0.47mg/l.

c) Mass Balance Equation for Suspended Solids

Flow of River (95%) = 0.2057 m3/sec
Average SS in River (upstream) = 2.5mg/l

Average volume of Discharge = 0.003 m3/sec
Average SS in Discharge = 45 mg/l

$$C_{final} = \frac{(0.2057 \times 2.5) + (0.003 \times 45)}{0.2057 + 0.003}$$

Cfinal = 3.11 mg/l BOD

The increase in SS due to the discharge of Kealkill WWTP is 0.61mg/l.

d) Mass Balance Equation Total Phosphate

50% Median flow of River = 0.731 m3/sec
Median TP in River (upstream) = 0.05mg/l

Average volume of Discharge = 0.003 m3/sec
Median value of TP in discharge = 1.17 mg/l

$$C_{final} = \frac{(0.731 \times 0.05) + (0.003 \times 1.17)}{0.731 + 0.003}$$

Cfinal = 0.055 mg/l TP

The increase in Total Phosphate due to the discharge of Kealkill WWTP is 5µg/l.

e) Mass Balance Equation for Total Nitrogen

Flow of River (95%) = 0.2057 m3/sec
Average Total Nitrogen in River (upstream) = 0.51mg/l

Average volume of Discharge = 0.003 m3/sec
Average Total Nitrogen in Discharge = 17.05mg/l

$$C_{final} = \frac{(0.2057 \times 0.51) + (0.003 \times 17.05)}{0.2057 + 0.003}$$

Cfinal = 0.74 mg/l Total Nitrogen

The increase in Total Nitrogen due to the discharge of Kealkill WWTP is 0.23mg/l.

f) Mass Balance Equation for Sulphate

Flow of River (95%) = 0.2057 m3/sec
Average Sulphate in River (upstream) = 30mg/l

Average volume of Discharge = 0.003 m3/sec
Average Sulphate in Discharge = 30mg/l

$$C_{final} = \frac{(0.2057 \times 30) + (0.003 \times 30)}{0.2057 + 0.003}$$

Cfinal = 30 mg/l Sulphate

The increase in Sulphate due to the discharge of Kealkill WWTP is 0.0mg/l.

g) Mass Balance Equation for Ammonia - N

Flow of River (95%) = 0.2057 m3/sec
Average Ammonia-N in River (upstream) = 0.1mg/l

Average volume of Discharge = 0.003 m3/sec
Average Ammonia-N in Discharge = 8.8mg/l

$$C_{final} = \frac{(0.2057 \times 0.1) + (0.003 \times 8.8)}{0.2057 + 0.003}$$

Cfinal = 0.23 mg/l Ammonia

The increase in Ammonia due to the discharge of Kealkill WWTP is 0.13mg/l.

- 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.

The Dangerous Substances Regulations define the main polluting pesticides, solvents and metals which have significant effects on the environment. As the effluent being discharge is mainly domestic, it can be assumed that the presence of these substances is negligible. This has been confirmed by results of analysis of receiving water outlined in Table E4. The main parameters which impact the receiving environment are limited to BOD, suspended solids and bacteria (total and faecal Streptococci).

- 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.

No water abstraction points exist down gradient of any of the discharge location.

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

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

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

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

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

  (b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC[1] in accordance with the procedures laid down in Article 21 of that Directive,

  (c) a special area of conservation within the meaning of the Natural Habitats Regulations, or

  (d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC[2];

  [1]Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ No. L 206, 22.07.1992)

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

Not applicable – None of the above directives apply in this case. Kealkill and its environs are not within a designated area

- 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**
		√

F.2 Tabular Data on Drinking Water Abstraction Point(s)

Applicants should submit the following information for each downstream or downgradient drinking water abstraction point. The zone of contribution for the abstraction point should be delineated and any potential risks from the waste water discharge to the water quality at that abstraction point identified.

ABS_CD	AGG_SERVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
Abstraction Code	Agglomeration served	Abstraction Volume in m^3/day	Point Code Provide label ID's	Distance Downstream in meters from Emission Point to Abstraction Point	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

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

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

Not applicable - No water abstraction points exist down gradient of any of the discharge location.

Attachment F.2 should contain any supporting information.

SECTION G: PROGRAMMES OF IMPROVEMENTS

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

G.1 Compliance with Council Directives

Provide details on a programme of improvements to ensure that emissions from the agglomeration or any premises, plant, methods, processes, operating procedures or other factors which affect such emissions will comply with, or will not result in the contravention of the;

- Dangerous Substances Directive 2006/11/EC,
- Water Framework Directive 2000/60/EC,
- Birds Directive 79/409/EEC,
- Groundwater Directives 80/68/EEC & 2006/118/EC,
- Drinking Water Directives 80/778/EEC,
- Urban Waste Water Treatment Directive 91/271/EEC,
- Habitats Directive 92/43/EEC,
- Environmental Liabilities Directive 2004/35/EC,
- Bathing Water Directive 76/160/EEC, and
- Shellfish Waters Directive (2006/113/EC).

Compliance with Council Directives

At present there is no record of non compliance in relation to the emissions from the agglomeration with the council directives. The influent undergoes secondary treatment at Kealkill Waste Water Treatment Plant prior to being discharged to the River Owvane. As the effluent being discharge is mainly domestic and with no industrial contribution, it can be assumed that the emissions from the agglomeration will not result in the contravention of the Council Directives.

Dangerous Substances Directive 2006/11/EC

The effluent from Kealkill agglomeration is mainly domestic and with no industrial contribution, we can assume that any dangerous substance mentioned in the Dangerous Substances Regulations will not be present in the discharge.

Water Framework Directive 2000/60/EC

Water Framework Directive 2000/60/EC – The objectives of the Water Framework Directive (WFD) are to protect all high status waters, prevent further deterioration of all waters and to restore degraded surface and ground waters to good status by 2015.

The South Western River Basin District (SWRBD) has classified the segment of the River Owvane between Kealkill and Ballylickey, where the River discharges to the sea, as “Good Status”.

Effluent being discharged is mainly domestic, with no industrial contribution. There is one primary & secondary discharge point. No sample was taken from the secondary discharge. As can be seen from the results of Section F.1, the emissions from the primary discharge point of the agglomeration will not result in the contravention of the Water Framework Directive.

Birds Directive 79/409/EEC
The directive aims to conserve and manage populations of wild birds throughout Europe by part through the designation of Special Protection Areas (SPA) for birds and their habitats. Kealkills primary & secondary discharge points are not located in an area designated as a Natural Heritage Area, a Special Area of Conservation, a Proposed Natural Heritage Area or a Special Protected Area. Due to this fact, it is not foreseen that any negative impacts will arise from the agglomeration in relation to these directives.

Groundwater Directives 80/68/EEC and 2006/118/EC
There are no emissions to groundwater.

Drinking Water Directives 80/778/EEC
This Directive concerns standards for water intending for human consumption. As there is no drinking water abstraction point downstream of any of the discharge points, this directive is not applicable.

Urban Waste Water Treatment Directive 91/271/EEC
Waste water at the Kealkill WWTP is subject to secondary treatment prior to discharge in order to meet with the required discharge standards as set out under the Urban Waste Water Treatment Regulations 2001. These standards are as follows:

BOD: 25mg/l
Suspended Solids: 35mg/l
COD: 125mg/l

From the sample taken of the effluent detailed in Attachment E.4 of this application, both BOD and COD slightly exceed both the respective limits as set out in these Regulations. As can be seen from the results of Section F.1, the impact of the emissions from the primary discharge point of the agglomeration on the River will be minimal. Samples from the treatment plant discharge are analysed for BOD, COD, Ammonia, pH, suspended solids, Total Nitrogen, Total Phosphorus, sulphate, Ortho phosphate and metals.

Habitats Directive 92/43/EEC
Kealkill's primary & secondary discharge points are not located in an area designated as a Natural Heritage Area, a Special Area of Conservation, a Proposed Natural Heritage Area or a Special Protected Area. Due to this fact, it is not foreseen that any negative impacts will arise from the agglomeration in relation to these directives.

Environmental Liabilities Directive 2004/35/EC
The Environmental Liabilities 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.

At present all wastewater treatment plants & septic tanks under the control of Cork County Council are monitored and maintained by full time Cork County Council

personnel and are desludged if deemed necessary, thus reducing the possibility of environmental damage.

Bathing Water Directive 76/160/EEC
There are no designated bathing waters in the vicinity of the discharge.

Shellfish Waters Directive 79/923/EEC
There are no waters designated for shellfish in the vicinity of the discharge.

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 the European Communities Environmental Objectives (Surface Waters) Regulations 2009

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 European Communities Environmental Objectives (Surface Waters) Regulations 2009 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 previously identified as the principal sources of pollution under the Phosphorous Regulations (S.I. No. 258 of 1998).

Receiving Water Quality Requirement based on Phosphorus Regulations 2008.

The EPA has 4 number stations on the River Owvane. There are 2 stations downstream of the discharge points. The 2 stations downstream of the WWPT have 4 Q value.

Effluent Standards

The treated effluent quality requirements are determined with respect to the EC Urban Wastewater Directive, given effect in Irish Law by SI 254 of 2001. The wastewater treatment processes should reduce nutrients in the final effluent. The minimum effluent standard based in SI 254 of 2001 for Phosphorus in wastewater effluent is 2mg/l and this is not exceeded at the plant.

As a natural consequence of secondary treatment, there will be an uptake of phosphorus for biomass synthesis at the wastewater treatment plant in Kealkill. As can be seen from the upstream and downstream results in Table E4 the Total P is <0.05mg/l and O-PO4-P is <0.05mg/l, which is within the regulations.

****

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

Attachment included	Yes	No
		√

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.

We will be seeking funding during the licence period to increase the capacity of the treatment 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
		√

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 – There is no storm water overflows pertaining to this application.

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 : _____ **Date :** 11-12-09
(on behalf of the organisation)

Print signature name: Moira Murrell

Position in organisation: Director of Service

SECTION I: JOINT DECLARATION

Joint Declaration [Note1]

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.

Lead Authority

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

Print signature name: _____

Position in organisation:_____

Co-Applicants

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

Print signature name: _____

Position in organisation:_____

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

Print signature name: _____

Position in organisation:_____

Note 1: In the case of an application being lodged on behalf of more than a single Water Services Authority the following declaration must be signed by all applicants.

ANNEX 1 – TABLES / ATTACHMENTS

Section A - Non Technical Summary

Attachment A1 – KEAL A1-01 – Site Location Map of Agglomeration

Section B - General

Attachment B1 – KEAL B1-01 – Kealkill Agglomeration Boundary Map

Attachment B2 – KEAL B2-01 – Site Location of Wastewater Treatment & Septic Tank

Attachment B3 – KEAL B3-01 – Location of the Primary Discharge Point

Attachment B4 – KEAL B4-01 – Location of the Secondary Discharge Point

Section E – Monitoring

Attachment E2 - Monitoring Programme

Attachment E2 - KEAL E2-01 – Locations of Sampling Points

Attachment E2 – KEAL E2-02 – Locations of Sampling Points

Attachment E4 - Sampling Data

Tables

Agglomeration Details

Tables D.1 – Emissions to Surface

Table E.1 - Wastewater Frequency and Quantity of Discharge

Table F.1 - Surface Monitoring

ANNEX 2 – Checklist

Checklist for Regulation 16/17 Compliance

SECTION A

Attachment A1

Map:

- **KEAL A1-01** - Site Location Map

NOTES

1. Do not scale, use figured dimensions only. If in doubt ask
2. All dimensions to be checked on site
3. Drawings to be read in conjunction with Licence application
4. Includes Ordnance Survey Ireland data reproduced under OSi Licence number Cork County Council CCMA2004/07 Unauthorised reproduction infringes Ordnance Survey Ireland and Government of Ireland

NORTH

KEY MAP NTS

No.	Date	Drwn	Chkd	Revision Description

Cork County Council, Western Division.

N.O'MAHONY,B.E.,
SENR.ENGR. (WATER SERVICES),
COURTHOUSE, SKIBBEREEN.

M. MURRELL.,
DIRECTOR OF SERVICES
WEST CORK

Job Title:

KEALKILL_WASTE WATER_DISCHARGE_CERTIFICATE APPLICATION

Drawing Title:

ATTACHMENT_A.1 AGGLOMERATION_LOCATION_MAP

Prepared By:	Checked By:	Date:
D.O'DONOVAN	D_GROARKE	DEC.2009

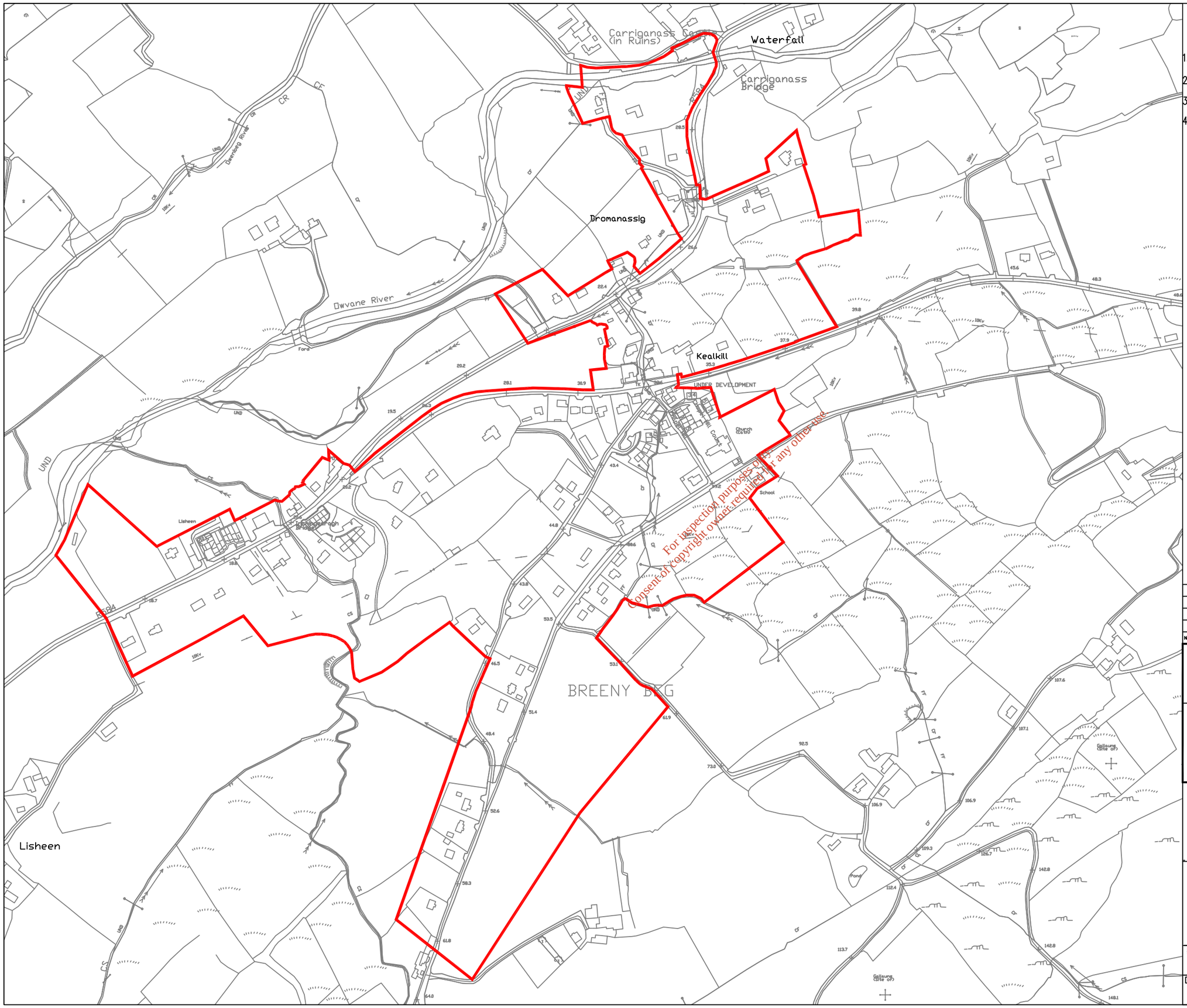
Drawing number:	Scales:	Rev:
KEAL_A1_01	NTS	-

SECTION B

Attachment B1

Map:

- **KEAL B1-01** – Kealkill Agglomeration Boundary Map



NOTES

1. Do not scale, use figured dimensions only. If in doubt ask
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M. MURRELL.,
DIRECTOR OF SERVICES
WEST CORK

Job Title:

KEALKILL_WASTE WATER_DISCHARGE_CERTIFICATE APPLICATION

Drawing Title:

ATTACHMENT_B.1 AGGLOMERATION_BOUNDARY

Prepared By:	Checked By:	Date:
D.O'DONOVAN	D_GROARKE	DEC.2009

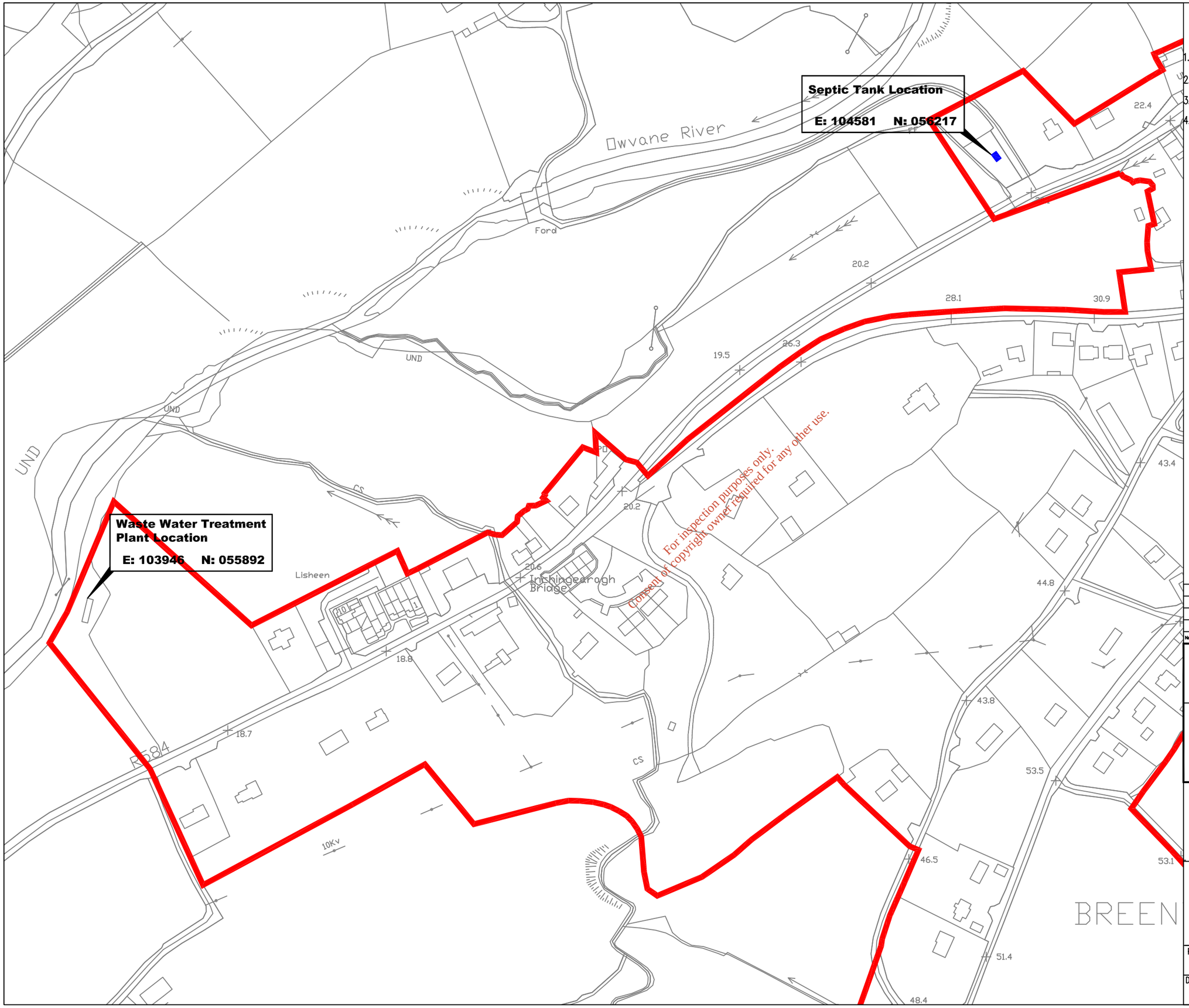
Drawing number:	Scales:	Rev:
KEAL_B1_01	1/5000	-

Attachment B.2

Attachment B2

Map:

- **KEAL B2-01** – Site Locations of Wastewater Treatment Plant & Septic Tank



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WEST CORK

Job Title:

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Drawing Title:

ATTACHMENT_B.2 LOCATION_OF_WASTE_WATER TREATMENT_PLANT_&_SEPTIC_TANK

Prepared By:	Checked By:	Date:
D.O'DONOVAN	D_GROARKE	DEC.2009

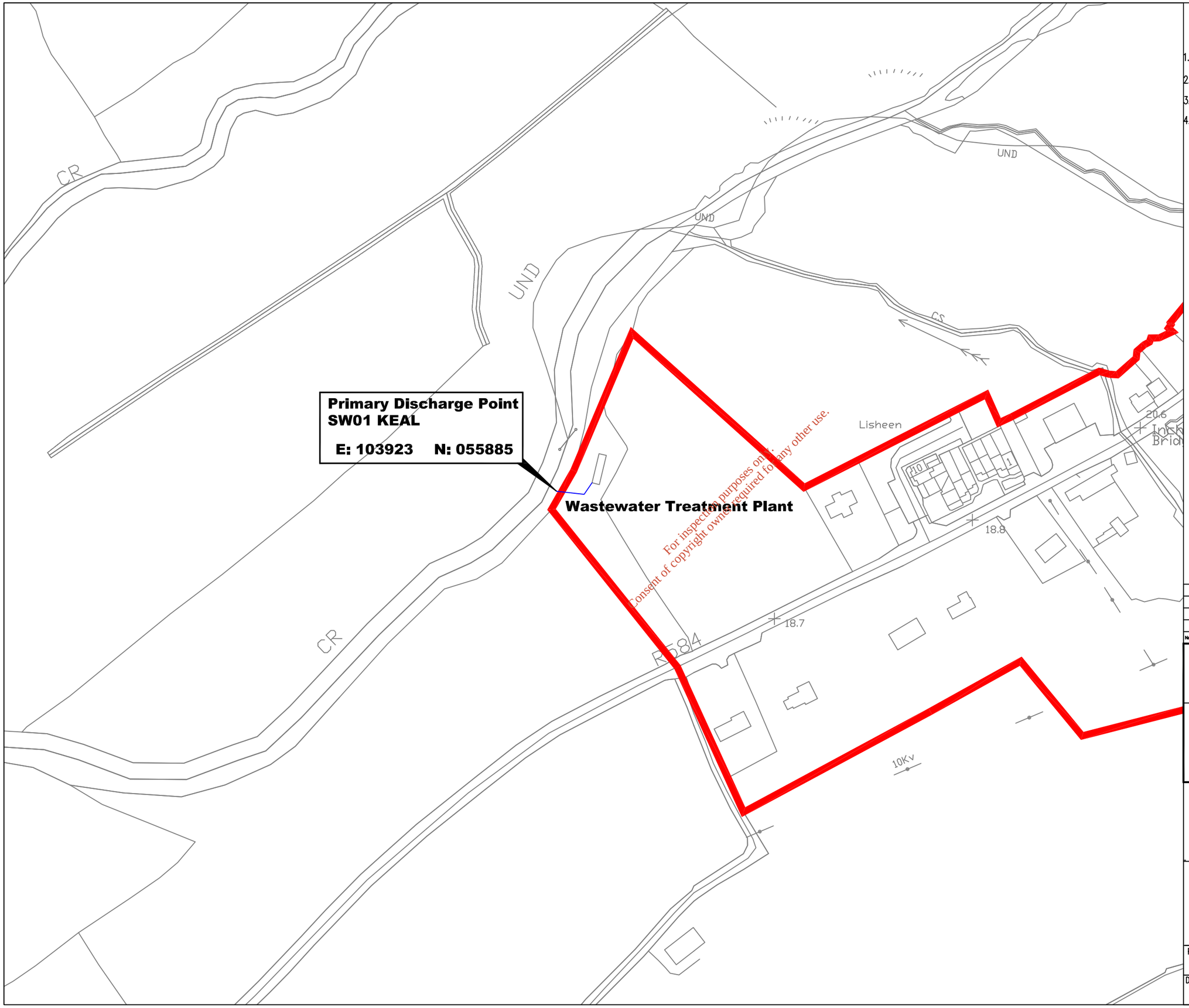
Drawing number:	Scales:	Rev:
KEAL_B2_01	1/2500	-

Attachment B.3

Attachment B3

Map :

- **KEAL B3-01** – Location of the Primary Discharge Point



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Job Title:

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Drawing Title:

ATTACHMENT_B.3 LOCATION_OF_PRIMARY_DISCHARGE_PT

Prepared By:	Checked By:	Date:
D.O'DONOVAN	D_GROARKE	DEC.2009

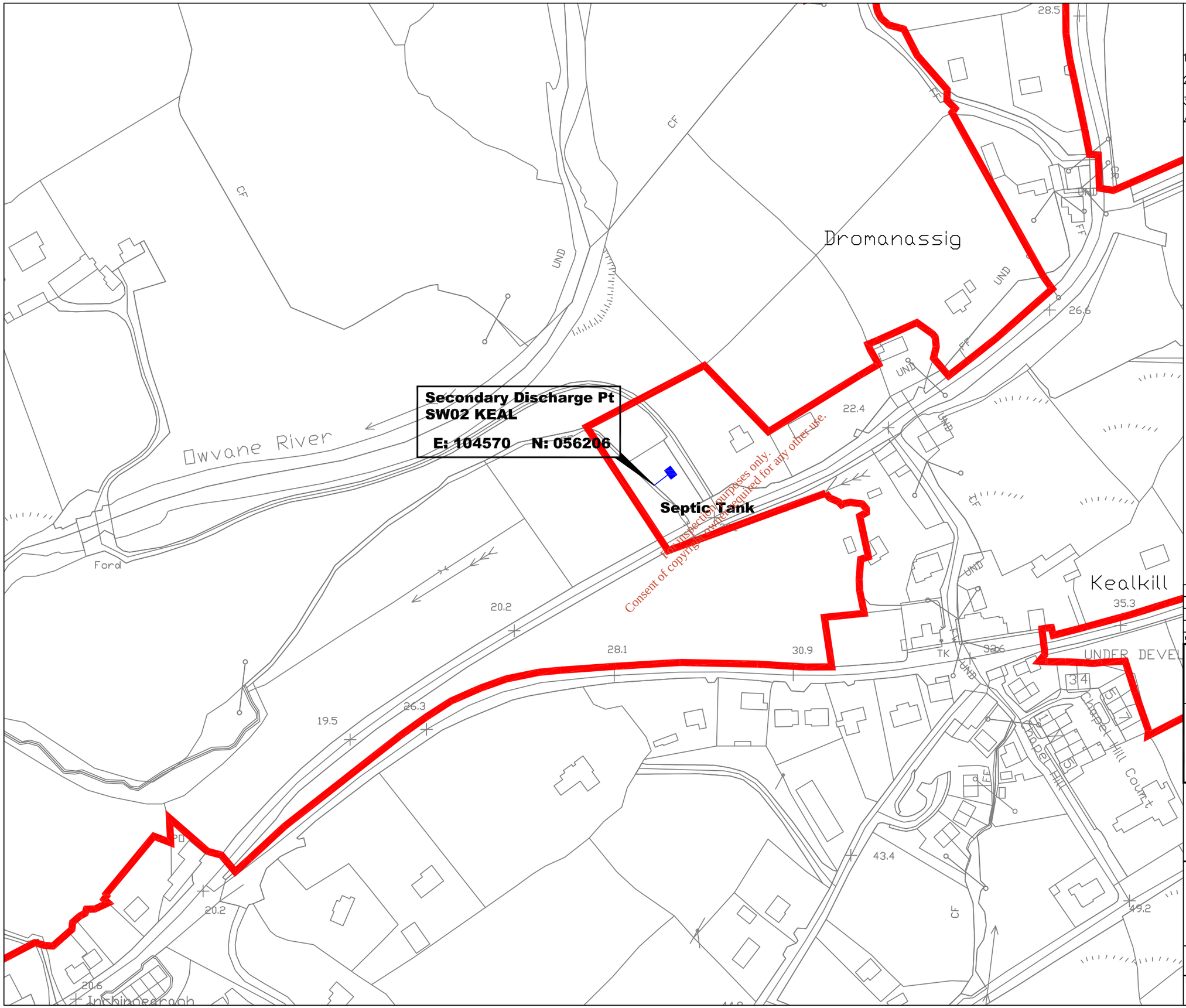
Drawing number:	Scales:	Rev:
KEAL_B3_01	1/2000	-

Attachment B.4

Attachment B4

Map :

- **KEAL B4-01** – Location of the Secondary Discharge Point



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Job Title:

KEALKILL_WASTE WATER_DISCHARGE_CERTIFICATE APPLICATION

Drawing Title:

ATTACHMENT_B.4
LOCATION_OF
SECONDARY_DISCHARGE_PT

Prepared By:	Checked By:	Date:
D.O'DONOVAN	D_GROARKE	DEC.2009

Drawing number:	Scales:	Rev:
KEAL_B4_01	1/2000	-

SECTION E

Attachment E2

Supporting Information:

- **Monitoring Programme**

Map :

KEAL E2-01 – Location of Sampling Points
KEAL E2-02 - Location of Sampling Points

Attachment E.2 – Kealkill Waste Water Discharge Licence Application – Monitoring and Sampling Points

Grab samples have been collected recently of the effluent from the primary discharge as well as receiving waters and the results are included in Attachments E.4 and F.1 of this application.

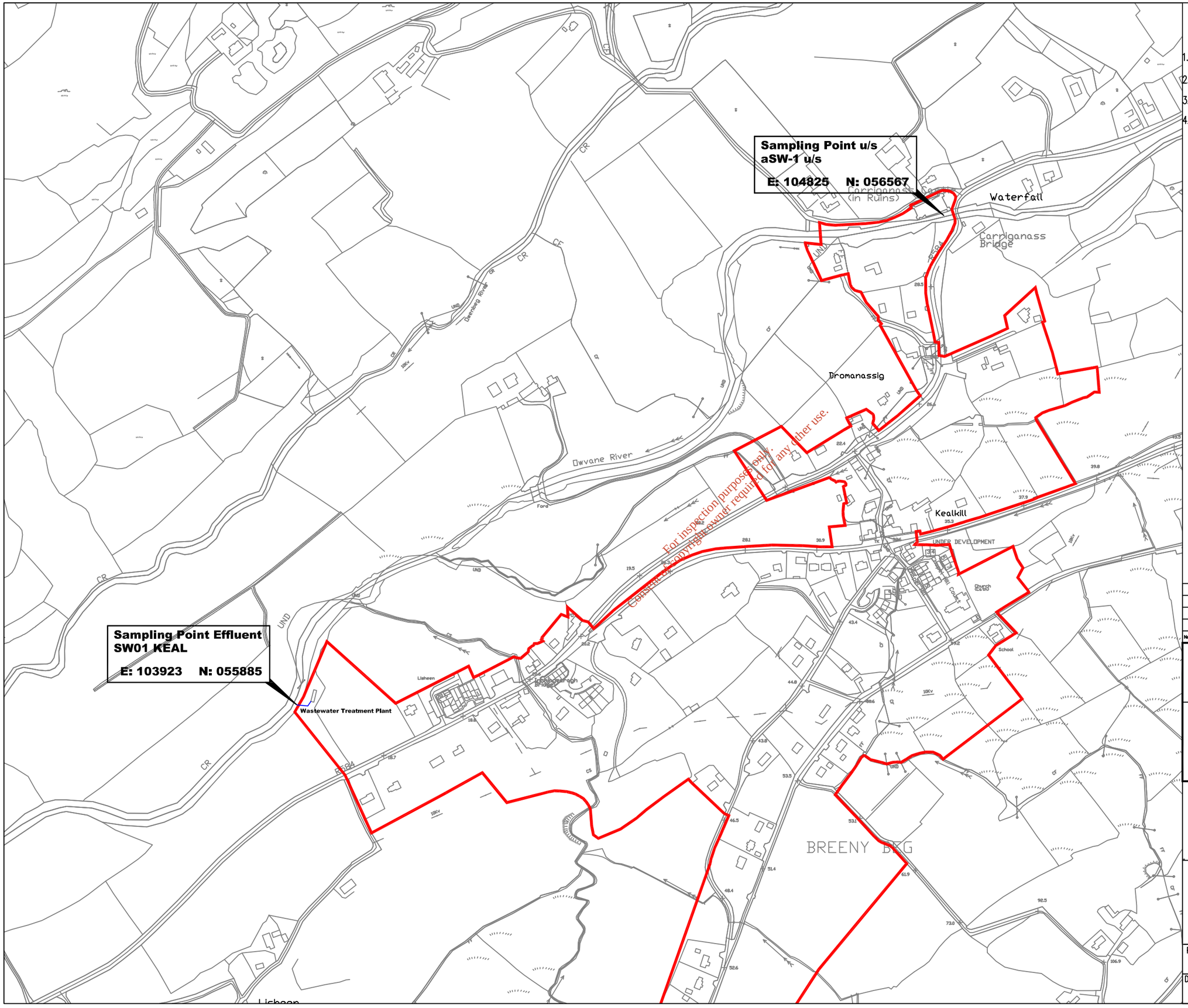
There is no drinking water abstraction point downstream of the discharge point.

The recent sample analysis has been carried out by the Laboratory of Cork County Council which is accredited for a number of analytical tests under the Irish National Accreditation Board (INAB) under the ISO 17025 international standard. It is currently accredited for the following parameters under that standard system:

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

It is proposed to sample the primary discharge effluent and receiving waters once a year for the following parameters at the Cork County Council Laboratory in Skibbereen:

- pH
- Biochemical Oxygen Demand
- Chemical Oxygen Demand
- Suspended Solids
- Ammonia
- Ortho Phosphate
- Total Nitrogen



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M. MURRELL.,
DIRECTOR OF SERVICES
WEST CORK

Job Title:

KEALKILL_WASTE WATER_DISCHARGE_CERTIFICATE APPLICATION

Drawing Title:

ATTACHMENT_E.2 LOCATION_OF_SAMPLING_POINTS

Prepared By:	Checked By:	Date:
D.O'DONOVAN	D_GROARKE	DEC.2009

Drawing number:	Scales:	Rev:
KEAL_E2_01	1/5000	-

Sampling Point Effluent
SW01 KEAL
E: 103923 N: 055885

Sampling Point
aSW-1 d/s
E: 102390 N: 054499

TRAWNAMADDRA
Waterfall
Waterfall
Aqueduct
FF EAST
Owenbeg River
Kilnacrompe Church (in Ruins)
Grave Yard
Tobermurry
Lisheen
Wastewater Treatment Plant
Bronanass
Owvane River
BREENY
LISHEEN
Lisheen Bridge
Fort (site of)
Gallaun (site of)
DRUMLICKACRUE
DRUMACLARIG
CAPPANABOUL

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M. MURRELL.,
DIRECTOR OF SERVICES
WEST CORK

Job Title:
KEALKILL_WASTE WATER_DISCHARGE_CERTIFICATE APPLICATION

Drawing Title:
ATTACHMENT_E.2
LOCATION_OF_SAMPLING_POINTS

Prepared By:	Checked By:	Date:
D.O'DONOVAN	D_GROARKE	DEC.2009
Drawing number: KEAL_E2_02	Scales: 1/10000	Rev: -

Attachment E.4

Attachment E4

Supporting Information:

- **Sampling Data**

Attachment E4 Kealkil Table E4

Sample Date	29/10/2009	29/10/2009	29/10/2009	29/10/2009
Sample	Influent	Effluent	Upstream	Downstream
Sample Code	GT1315	GT1316	GT1318	GT1317
Flow M^3/Day	*	*	*	*
pH	7.6	7.4	7.6	7.5
Temperature °C	*	*	*	*
Conductivity uS/cm 20°C	282	287	64	65
Suspended Solids mg/L	37	45	<2.5	<2.5
Ammonia-N mg/L	8.5	8.8	<0.1	<0.1
BOD mg/L	22	34	1	<1
COD mg/L	90	77	49	40
TN-N mg/L	15.54	17.05	0.51	0.62
Nitrite-N mg/L	0.1	<0.1	<0.1	<0.1
Nitrate-N mg/L	<0.5	<0.5	<0.5	<0.5
TP-P mg/L	1.1	1.17	<0.05	<0.05
O-PO4-P mg/L	0.82	0.88	<0.05	<0.05
SO4 mg/L	<30	<30	<30	<30
Phenols µg/L	*	<0.10	*	<0.10
Atrazine µg/L	*	<0.01	*	<0.01
Dichloromethane µg/L	*	<1	*	<1
Simazine µg/L	*	<0.01	*	<0.01
Toluene µg/L	*	<0.28	*	<0.28
Tributyltin µg/L	*	NOT REQUIRED	*	NOT REQUIRED
Xylenes µg/L	*	<0.73	*	<1
Arsenic µg/L	*	2	*	0.4
Chromium ug/L	<20	<20	<20	<20
Copper ug/L	<20	<20	<20	<20
Cyanide µg/L	*	<5	*	*
Fluoride µg/L	28	31	25	28
Lead ug/L	<20	<20	<20	<20
Nickel ug/L	<20	<20	<20	<20
Zinc ug/L	<20	<20	<20	<20
Boron ug/L	<20	<20	<20	<20
Cadmium ug/L	<20	<20	<20	<20
Mercury µg/L	*	<0.03	*	<0.03
Selenium µg/L	*	<2.12	*	1.1
Barium ug/L	<20	<20	<20	<20

Agglomeration details

Leading Local Authority	Cork County Council
Co-Applicants	
Agglomeration	Kealkil
Population Equivalent	450
Level of Treatment	Secondary
Treatment plant address	Lisheen, Kealkill, Co. Cork
Grid Ref (12 digits, 6E, 6N)	103946 / 055892
EPA Reference No:	

Contact details

Contact Name:	Niall O'Mahony
Contact Address:	Water Services West Cork County Council Courthouse Skibbereen Co. Cork
Contact Number:	028-21299
Contact Fax:	028-21995
Contact Email:	niall.omahony@corkcoco.ie

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

Discharge Point Code: SW-1

Local Authority Ref No:	SW01 KEAL	
Source of Emission:	Primary Discharge - Treated effluent	
Location:	Lisheen	
Grid Ref (12 digits, 6E, 6N)	103923 / 055885	
Name of Receiving waters:	Owvane River	
Water Body:	River Water Body	
River Basin District	South Western RBD	
Designation of Receiving Waters:	None	
Flow Rate in Receiving Waters:	1.462	$m^3.sec^{-1}$ Dry Weather Flow
	0.2057	$m^3.sec^{-1}$ 95% Weather Flow
Additional Comments (e.g. commentary on zero flow or other information deemed of value)		

Emission Details:

(i) Volume emitted			
Normal/day	92.7 m^3	Maximum/day	278.1 m^3
Maximum rate/hour	11.6 m^3	Period of emission (avg)	60 min/hr 24 hr/day 365 day/yr
Dry Weather Flow	0.003 m^3/sec		

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	= 0	
Electrical Conductivity (@ 25°C)	µS/cm	Grab	= 0	
Suspended Solids	mg/l	Grab	= 45	4.17
Ammonia (as N)	mg/l	Grab	= 8.8	0.82
Biochemical Oxygen Demand	mg/l	Grab	= 34	3.15
Chemical Oxygen Demand	mg/l	Grab	= 125	11.6
Total Nitrogen (as N)	mg/l	Grab	= 35	3.24
Nitrite (as N)	mg/l	Grab	= 0	0
Nitrate (as N)	mg/l	Grab	= 0	0
Total Phosphorous (as P)	mg/l	Grab	= 8	0.74
OrthoPhosphate (as P)	mg/l	Grab	= 6	0.56
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.

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			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
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.

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

Discharge Point Code: SW-2

Local Authority Ref No:	SW02 KEAL	
Source of Emission:	Secondary Discharge - Treated Effluent	
Location:	Gearagh	
Grid Ref (12 digits, 6E, 6N)	104570 / 056206	
Name of Receiving waters:	Owvane River	
Water Body:	River Water Body	
River Basin District	South Western RBD	
Designation of Receiving Waters:	None	
Flow Rate in Receiving Waters:	0	$m^3.sec^{-1}$ Dry Weather Flow
	0	$m^3.sec^{-1}$ 95% Weather Flow
Additional Comments (e.g. commentary on zero flow or other information deemed of value)	Flow Rates of receiving waters not available.	

Emission Details:

(i) Volume emitted			
Normal/day	8.55 m^3	Maximum/day	25.56 m^3
Maximum rate/hour	1.07 m^3	Period of emission (avg)	60 min/hr 24 hr/day 365 day/yr
Dry Weather Flow	0.0003 m^3/sec		

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

Discharge Point Code: SW-2

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
pH	pH	Grab	= 9	
Temperature	°C	Grab	= 0	
Electrical Conductivity (@ 25°C)	µS/cm	Grab	= 0	
Suspended Solids	mg/l	Grab	= 250	2.14
Ammonia (as N)	mg/l	Grab	= 0	0
Biochemical Oxygen Demand	mg/l	Grab	= 210	1.8
Chemical Oxygen Demand	mg/l	Grab	= 460	3.9
Total Nitrogen (as N)	mg/l	Grab	= 50	0.43
Nitrite (as N)	mg/l	Grab	= 0	0
Nitrate (as N)	mg/l	Grab	= 0	0
Total Phosphorous (as P)	mg/l	Grab	= 12	0.1
OrthoPhosphate (as P)	mg/l	Grab	= 10	0.085
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.

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

Discharge Point Code: SW-2

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
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.

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	33835.5
SW-2	365	3120.75

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

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)	102390 / 054499

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	29/10/09					
pH		= 7.5			Grab	2	Electrochemical
Temperature	= 0				Grab	0.5	Electrochemical
Electrical Conductivity (@ 25°C)		= 65			Grab	0.5	Electrochemical
Suspended Solids		< 2.5			Grab	0.5	Gravimetric
Ammonia (as N)		< 0.1			Grab	0.02	Colorimetric
Biochemical Oxygen Demand		< 1			Grab	0.06	Electrochemical
Chemical Oxygen Demand		= 40			Grab	8	Digestion & Colorimetric
Dissolved Oxygen	= 0				Grab	0.2	Electrochemical
Hardness (as $CaCO_3$)	= 0				Grab	1	titrimetric
Total Nitrogen (as N)		= 0.62			Grab	0.5	Digestion & Colorimetric
Nitrite (as N)		< 0.1			Grab	0.1	Colorimetric
Nitrate (as N)		< 0.5			Grab	0.5	Colorimetric
Total Phosphorous (as P)		< 0.05			Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)		< 0.05			Grab	0.02	Colorimetric
Sulphate (SO_4)		< 30			Grab	30	Turbidimetric
Phenols (Sum)		< 0.1			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- no requirement for TBT testing

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)	102390 / 054499

Parameter	Results (µg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	29/10/09					
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		= 28			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		= 1.1			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- no requirement for TBT testing

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)	104825 / 056567

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	29/10/09					
pH		= 7.6			Grab	2	Electrochemical
Temperature	= 0				Grab	0.5	Electrochemical
Electrical Conductivity (@ 25°C)		= 64			Grab	0.5	Electrochemical
Suspended Solids		< 2.5			Grab	0.5	Gravimetric
Ammonia (as N)		< 0.1			Grab	0.02	Colorimetric
Biochemical Oxygen Demand		= 1			Grab	0.06	Electrochemical
Chemical Oxygen Demand		= 49			Grab	8	Digestion & Colorimetric
Dissolved Oxygen	= 0				Grab	0.2	ISE
Hardness (as $CaCO_3$)	= 0				Grab	1	titrimetric
Total Nitrogen (as N)		= 0.51			Grab	0.5	Digestion & Colorimetric
Nitrite (as N)		< 0.1			Grab	0.1	Colorimetric
Nitrate (as N)		< 0.5			Grab	0.5	Colorimetric
Total Phosphorous (as P)		< 0.05			Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)		< 0.05			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 no results are available

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)	104825 / 056567

Parameter	Results (µg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	29/10/09					
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		= 25			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- no requirement for TBT testing

TABLE F.1(ii)(a): SURFACE/GROUND WATER MONITORING

Secondary Discharge Point

Discharge Point Code:	SW-2
MONITORING POINT CODE:	aSW-2d
Grid Ref (12 digits, 6E, 6N)	102390 / 054499

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	29/10/09					
pH		= 7.5			Grab	2	Electrochemical
Temperature	= 0				Grab	0.5	Electrochemical
Electrical Conductivity (@ 25°C)		= 65			Grab	0.5	Electrochemical
Suspended Solids		< 2.5			Grab	0.5	Gravimetric
Ammonia (as N)		< 0.1			Grab	0.02	Colorimetric
Biochemical Oxygen Demand		< 1			Grab	0.06	Electrochemical
Chemical Oxygen Demand		= 40			Grab	8	Digestion & Colorimetric
Dissolved Oxygen	= 0				Grab	0.2	Electrochemical
Hardness (as $CaCO_3$)	= 0				Grab	1	titrimetric
Total Nitrogen (as N)		= 0.62			Grab	0.5	Digestion & Colorimetric
Nitrite (as N)		< 0.1			Grab	0.1	Colorimetric
Nitrate (as N)		< 0.5			Grab	0.5	Colorimetric
Total Phosphorous (as P)		< 0.05			Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)		< 0.05			Grab	0.02	Colorimetric
Sulphate (SO_4)		< 30			Grab	30	Turbidimetric
Phenols (Sum)		< 0.1			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- no requirement for TBT testing

TABLE F.1(ii)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)

Secondary Discharge Point

Discharge Point Code:	SW-2
MONITORING POINT CODE:	aSW-2d
Grid Ref (12 digits, 6E, 6N)	102390 / 054499

Parameter	Results (µg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	29/10/09					
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		= 28			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		= 1.1			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- no requirement for TBT testing

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 appropiate 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,		
(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,		
(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,		
(d)	state the population equivalent of the agglomeration to which the application relates,		
(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,		
(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.		
(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,		
(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,		
(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,		
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,		
(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,		
(l)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,		
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.		
(n)	Any other information as may be stipulated by the Agency.		
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,	Not applicable	Yes
(b)	where appropriate, a copy of the notice given to a relevant water services authority under Regulation 13,	Not applicable	Yes
(c)	Such other particulars, drawings, maps, reports and supporting documentation as are necessary to identify and describe, as appropriate -	B	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	B.3, B.4	Yes
(c) (ii)	the point or points at which monitoring and sampling are undertaken or are to be undertaken,	E.3	Yes
(d)	such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		Yes

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 agancy.		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.	Not applicable	Yes
1	EIA provided if applicable	Not applicable	Yes
2	2 hardcopies of EIS provided if applicable.	Not 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	B.1	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,	Not applicable	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,	B.2	Yes
(d)	state the population equivalent of the agglomeration to which the application relates,	B.8	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,	C, D	Yes
(f)	specify the content and extent of the waste water discharge, the level of treatment provided and the flow and type of discharge,	F.1	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,	E.2, E.3	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,	E.4	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,	G.3	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,	F.2	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,	F.1	Yes
(l)	give details of any designation under any Council Directive or Regulations that apply in relation to the receiving waters,	E.1, E.4	Yes
(m)	give details of compliance with any applicable monitoring requirements and treatment standards,	G.1	Yes
(n)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work,	Not applicable	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