

Comhairle Contae Chorcaí Cork County Council

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



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

Our Ref.: CB/IGLA/221209

22 December 2009

Re: Waste Water Discharge Certificate of Authorisation Application for the
Inchigeelagh Agglomeration

Dear Sir/Madam,

Please find enclosed the Waste Water Discharge Certificate of Authorisation
Application for the Inchigeelagh Agglomeration

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

- 1 No. signed original hard copy.
- 1 No. copy of the signed original.
- 2 No. CD-ROMs with the documentation in electronic searchable PDF.
- 1 No. CD with Geo-referenced digital drawing files and tabular data templates.

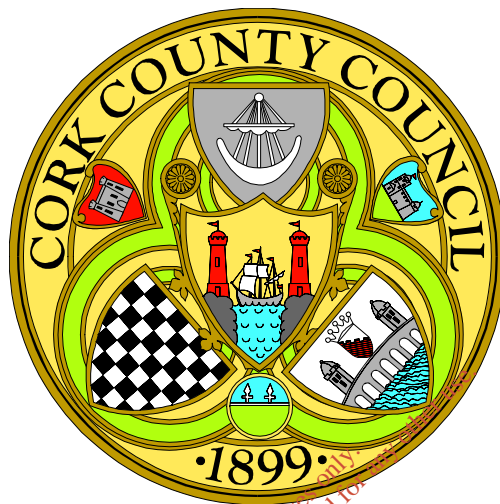
The content of the electronic files is a true copy of the signed original hard copy.

Yours faithfully,

Patricia Power
Director of Services



APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE WATER DISCHARGE CERTIFICATE OF AUTHORISATION



Waste Water Discharge Certificate of Authorisation
Application for the agglomeration of **Inchigeelagh** under the
Wastewater Discharge Authorisation Regulations S.I. 684 of
2007.

Water Services Name: *Cork County Council, Southern Division.*

Category of Application: *< 500 PE.*

Submitted To: *Licencing Unit, Environmental Protection Agency,
Wexford.*

Date Application Lodged: *22nd December 2009*

This is a draft document and is subject to revision.



Waste Water Discharge Certificate of Authorisation Application Form

EPA Ref. N^o:
(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	<p>Delete reference to Design Build and Operate</p> <p>Delete the requirement to provide contact information for the associated waste water treatment plant</p> <p>Replace references to the Water Services investment Programme with the Small Schemes Programme</p> <p>Update references to new legislation</p> <p>Inclusion of the requirement to submit information on private WWTPs within the agglomeration.</p>	<p>To accurately reflect the information required for the small schemes programme</p> <p>To accurately reflect the information required and the scale of the waste water works</p> <p>To accurately reflect the information required for the small schemes programme</p> <p>To reflect changes in legislation</p> <p>To obtain an overview of all discharges within the agglomeration.</p>

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

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ABOUT THIS APPLICATION FORM

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

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

A valid application for a Waste Water Discharge Certificate of Authorisation must contain the information prescribed in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). Regulation 24 of the Regulations sets out the statutory requirements for information to accompany a Certificate of Authorisation application. The application form is designed in such a way as to set out these questions in a structured manner and not necessarily in the order presented in the Regulations. In order to ensure a legally valid application with respect to Regulation 24 requirements, please complete the Regulation 24 Checklist provided in the following web based tool: http://78.137.160.73/epa_wwd_licensing/

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

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

PROCEDURES

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

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

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

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

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

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

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

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

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

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

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

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SECTION A: NON-TECHNICAL SUMMARY

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

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

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

A description of:

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

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

Non-Technical Summary

Inchigeelagh is located approximately 15 kilometres southwest of Macroom. The village is situated on the R-584-157 regional route connecting Macroom with Bantry. In the overall strategy of this Local Area Plan, Inchigeelagh is designated as a village within the Macroom Electoral Area. The village has experienced a large amount of development over the last few years.

The Waste Water Works and the activities carried out therein.

The Inchigeelagh Agglomeration can be split up into 2 catchments.

The Northern Catchment

The northern catchment consists of all of Inchigeelagh Village North of the River Lee. In general the sewer network runs East-West along the Macroom Road (R-584-157) and then South towards Inchigeelagh Bridge. This is a combined sewer system. The sewerage from this catchment is discharged directly to the River Lee at the primary discharge point.

The Southern Catchment

The southern catchment consists of all of Inchigeelagh Village South of the River Lee. In general the sewer network runs North towards Inchigeelagh Bridge, it then runs to the East, towards the septic tank. This is a combined sewer system.

The septic tank which serves this catchment is operated by Cork County Council.

The system is comprised of the following;

- Storm Overflow Chamber
- Inlet
- Septic Tank
- Soakway
- Outlet

The septic tank was built in the 1960s with a capacity of 90PE. The current load on the septic tank is approximately 53PE. It is therefore operating within its capacity. The septic tank provides only preliminary treatment. The passage of sewage through a septic tank helps in the removal of suspended solids but there is very little biological activity and the removal of BOD is not significant. This septic tank discharges to the adjacent River Lee.

The septic tank currently does not have any sampling regime in place.

The sources of emissions from the waste water works.

The population load for the Inchigeelagh agglomeration arises from the following sources:

- Domestic Population
- Commercial Premises
- School
- Infiltration

The sewage from all non-domestic premises is collected via the existing sewer network and is treated in conjunction with the domestic waste at the Septic tank. The septic tank does receive any other sludge imported from other municipal waste water sources or septic tanks.

Other potential emissions from the waste water treatment plant include;

- Odour generated from the treatment process – No recorded issues to date.
- Noise pollution – No recorded Issues to date.

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

The final effluent from the septic tank in the southern catchment and the outfall in the northern catchment discharges to the River Lee which runs through the village from West to East. The average outfall from the septic tank in the southern catchment is in the order of 12m³/day which is equivalent to a PE of 53. The average outfall from the northern catchment is in the order of 35.8m³/day which is equivalent to a PE of 159.

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

Technology

Not applicable as there are no current proposals for Inchigeelagh.

Techniques

Not applicable as there are no current proposals for Inchigeelagh.

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

Not applicable as there are no further measures planned.

Measures planned to monitor emissions into the environment.

No ongoing monitoring is currently carried out on the influent and effluent from the Septic Tank. Cork County Council Environmental Department, Inniscarra has carried out some ambient monitoring in the River Lee and some monitoring of the effluent as part of this application. The River Lee is monitored by the EPA, upstream at Inchinossig Bridge and at the Footbridge at Castlemasters downstream.

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SECTION B: GENERAL

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

B.1 Agglomeration Details

Name of Agglomeration: Inchigeelagh
--

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:	County Hall
	Carrigrohane Road
	Cork
Tel:	021 4276891
Fax:	021 4276321
e-mail:	

*This should be the name of the Water Services Authority in whose ownership or control the waste water works is vested.

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

Name*:	Patricia Power
Address:	Director of Services: Operational Water Services
	Floor 5 (Tower)
	County Hall
	Cork
Tel:	021 4285285
Fax:	021 4276321
e-mail:	Patricia.power@corkcoco.ie

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

Co-Applicant's Details

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

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

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

Attachment included	Yes	No
	✓	

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

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

Name*:	Faughna Keohane
Address:	Cappanclare Inchigeelagh Cork
Grid ref (6E, 6N)	122571 E, 065818 N
Level of Treatment	Primary

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

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

Attachment included	Yes	No
	✓	

B.3 Location of Primary Discharge Point

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

Discharge to	Surface Water
Type of Discharge	Pipe to River (375mm Dia. Concrete Pipe)
Unique Point Code	SW1IGLA
Location	Carrleigh, Inchigeelagh
Grid ref (6E, 6N)	122515 E, 065900 N

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

Attachment included	Yes	No
	✓	

B.4 Location of Secondary Discharge Point(s)

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

Discharge to	Surface Water
Type of Discharge	Pipe to River (225mm Dia. Concrete Pipe)
Unique Point Code	SW2IGLA
Location	Cappanclare, Inchigeelagh
Grid ref (6E, 6N)	122587 E, 065829 N

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

Attachment included	Yes	No
	✓	

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

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

Type of Discharge	Pipe to River
Unique Point Code	SW3IGLA
Location	Cappanclare, Inchigeelagh
Grid ref (6E, 6N)	122571 E, 065838 N

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

Attachment included	Yes	No
	✓	

B.6 Planning Authority

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

Name:	Cork County Council
Address:	Planning Department County Hall Carrigrohane Road Cork
Tel:	021 4276891
Fax:	021 4867007
e-mail:	planninginfo@corkcoco.ie

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

has been obtained	✓	is being processed	
is not yet applied for		is not required	

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

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 Services Executive Southern Region
Address:	North Lee Local Heath Office Abbeycourt House George's Quay, Cork
Tel:	021 4965511
Fax:	
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.

Population Equivalent	212
Data Compiled (Year)	2009
Method	House Counts and Population Data

Domestic Contribution

There are 60 existing dwellings within the agglomeration boundary served by the public sewer.

Non Domestic Contribution

The non domestic contribution is made up of 4 Shops, 2 Public Houses, 1 Hotel 1 Garage, 1 School, 1 Post Office, 1 B&B, 1 Warehouse Shop and Restaurant, 1 Feed Merchant and 1 Community Centre.

Pending Development

A further 29 dwellings, 23 serviced sites and 1 Shop have been granted planning permission within the agglomeration boundary. However the 29 dwelling and 23 serviced sites proposal is to be provided with its own its own WWTP. (Planning File Reference No. 06/1800).

The total number of dwellings, existing and future is 60. Assuming that there are c2.8 persons per household (CSO Data), this gives a PE of 168. Assuming that the non-domestic contribution is 15% of the domestic, adds another PE of 25. This brings the total PE to 193. Finally an additional 10% should be added to the current figure over what already has been allowed, to account for further future development. This adds an additional PE of 19, resulting in a PE of 212.

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.

The PE of 212 obtained in the previous section includes a PE of 19 which is a 10% allowance for future development.

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 €)
>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.

Not Applicable as there is no programme of improvements planned.

Attachment B.9 should contain the most recent development programme, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
		✓

B.10 Significant Correspondence

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

Not Applicable

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

Attachment included	Yes	No
		✓

B.11 Foreshore Act Licences.

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

Not Applicable

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

Attachment included	Yes	No
		✓

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 Operational Information Requirements

Inchigeelagh is located approximately 15 kilometres southwest of Macroom. The village is situated on the R-584-157 regional route connecting Macroom with Bantry. In the overall strategy of this Local Area Plan, Inchigeelagh is designated as a village within the Macroom Electoral Area. The village has experienced a large amount of development over the last few years.

The Inchigeelagh Agglomeration can be split up into 2 catchments.

The Northern Catchment

The northern catchment consists of all of Inchigeelagh Village North of the River Lee. In general the sewer network runs East West along the Macroom Road (R-584-157) and then South towards Inchigeelagh Bridge. This is a combined sewer system. The sewerage from this catchment is discharged directly to the River Lee at the primary discharge point.

The Southern Catchment

The southern catchment consists of all of Inchigeelagh Village South of the River Lee. In general the sewer network runs North towards Inchigeelagh Bridge, it then runs to the East, towards the septic tank. This is a combined sewer system.

The septic tank which serves this catchment is operated by Cork County Council.

The system is comprised of the following;

- Storm Overflow Chamber
- Inlet
- Septic Tank
- Soakway
- Outlet

Primary Treatment

Under normal operating conditions all of the influent enters the septic tank, which has a capacity of 18.2m³. The capacity in terms of PE has been estimated at 90. Here the heavy solids settle to the bottom of the tank and are stored for collection. The effluent then flows to the primary discharge point. The septic tank provides only preliminary treatment. The passage of sewage through a septic tank helps in the removal of suspended solids but there is very little biological activity and the removal of BOD is not significant.

The septic tank was built in the 1960s with a capacity of 90PE. The current load on the septic tank is approximately 53PE. It is therefore operating within its capacity. The septic tank provides only preliminary treatment. The passage of sewage through a septic tank helps in the removal of suspended solids but there is very little biological activity and the removal of BOD is not significant. This septic tank discharges to the adjacent River Lee.

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.

C.1.1 Storm Water Overflows

There is one Storm Water Overflow (SWO) associated with the Septic Tank in Inchigeelagh. The tank is provided with a Storm Water Overflow Chamber which diverts Storm water to the adjacent River Lee, via the Storm Water Overflow.

There is no information regarding the frequency of storm water overflows, or the quantities discharged.

There are no designated shellfish waters or bathing waters affected by the SWO. River Lee Main Channel from source to Cork City waterworks at Lee Road is designated as salmon waters. There are 2 drinking water abstraction points on the River Lee. These are located downstream of the discharge points and are at Inniscarra Reservoir and at Lee Road Waterworks. These are approximately 38km and 51km respectively downstream of the primary discharge point. Therefore the quality standards or objectives for the aquatic environment considered in the DoEHLG "Procedures and Criteria in Relation to Storm Water Overflows" (1995) apply.

There is no system in place to provide the 80% minimum storm water containment level required. (As detailed in the DoEHLG "Procedures and Criteria in Relation to Storm Water Overflows" (1995) in "Section 3.3 Sensitive areas").

The DoEHLG "Procedures and Criteria in Relation to Storm Water Overflow" (1995), provides assessment criteria for existing SWO. These criteria are discussed below;

1. Determine if the SWO causes significant visual or aesthetic impact and public complaints.

There are no records of public complaints regarding the SWO to date.

2. Determine if the SWO causes deterioration in water quality of the receiving water.

There is no specific data regarding the overflows from the septic tank.

3. Determine if the SWO gives rise to failure in meeting the requirements of National Regulations on foot of EU Directives (Bathing Waters etc).

There is no information available regarding the quality of the SWOs, therefore and assessment cannot be made.

4. Determine if the SWO operates in dry weather.

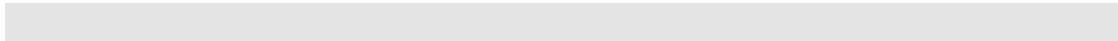
There are no records to indicate if the SWOs operate in dry weather.

C.1.2 Pumping Stations

Not Applicable as there are no pumping stations within the agglomeration.

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

Attachment included	Yes	No
		✓



SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT

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

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

Details of all discharges of waste water from the agglomeration should be submitted via the following web based link: http://78.137.160.73/epa_wwd_licensing/. The applicant should address in particular all discharge points where the substances outlined in Tables 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions' are emitted

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

D.1(i) Discharges to Surface Waters

Details of all discharges of waste water from the agglomeration should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Discharge Point Details', 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions', should be completed for the primary discharge point from the agglomeration and for **each** secondary discharge point, where relevant. Table 'Discharge Point Details' should be completed for **each** storm water overflow. Individual Tables must be completed for each discharge point.

Where monitoring information is available for the influent to the waste water treatment plant this data should also be provided in response to Section D.1(i).

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

Attachment included	Yes	No
		✓

D.1(ii) Discharges to Groundwater

Details of all discharges of waste water from the agglomeration should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Discharge Point Details', 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions', should be completed for the primary discharge point from the agglomeration and for **each** secondary discharge point, where relevant. Table 'Discharge Point Details' should be completed for **each** storm water overflow. Individual Tables must be completed for each discharge point.

Where monitoring information is available for the influent to the waste water treatment plant this data should also be provided in response to Section D.1(ii).

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

Attachment included	Yes	No
		✓

D.1 (iii) Private Waste Water Treatment Plants

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

There is 1 private WWTP with a Section 4 Discharge licence in the Inchigeelagh agglomeration. This private WWTP serves the Carrleigh Estate. This is a Co-Sam 80 WWTP with a design capacity of 80 PE.

The Carrleigh Estate WWTP is comprised of the following;

- Inlet
- Aerated Media Tank
- Secondary Settlement Tank
- Outlet
- Percolation Areas

This WWTP discharges to the ground water via percolation areas.

A Location map and the discharge licence are included in Attachment D

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_TY PE	RWB_NAME	DESIGNATION	EASTING	NORTHING
SW1IGLA	Primary	Cork County Council	River	River Lee	pNHA	122515	065900
SW2IGLA	Secondary	Cork County Council	River	River Lee	pNHA	122587	065829
SW3IGLA	Storm Water	Cork County Council	River	River Lee	pNHA	122571	065838

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.

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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.

E.2 Monitoring in respect of Inchigeelagh Waste Water Discharge Licence Application Form

There is no monitoring system in place for any of the Discharges or the Septic Tank. For the purposes of this application samples were collected at the outlet and at an ambient monitoring point and tested by the Environmental Directorate of Cork County Council.

The River Lee is monitored by the EPA, upstream at Inchinossig Bridge and at the Footbridge at Castlemasters downstream.

General Laboratory Information

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

- pH
- Biochemical Oxygen Demand

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

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

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

Attachment included	Yes	No
	✓	

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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
SW1	Primary Discharge	S	122453	065905	Y
aSW-1d	Ambient	S	122601	065864	Y

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

E.4 Sampling Data

Regulation 24(i) of the Waste Water Discharge (Authorisation) Regulations 2007 requires all applicants in the case of an existing discharge to specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application.

Regulation 24(m) requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

Attachment E.4 should contain any supporting information.

Attachment included	Yes	No
	✓	

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

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

Clear and concise information is required to enable the Agency to assess the existing receiving environment. This section requires the provision of information on the ambient environmental conditions within the receiving water(s) upstream and downstream of any discharge(s) and/or the ambient environmental conditions of the groundwater upgradient and downgradient of any discharges.

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

F.1. Impact on Receiving Surface water or Groundwater

- Details of monitoring of the receiving surface water should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed for the primary discharge point. Surface water monitoring locations upstream and downstream of the discharge point shall be screened for those substances listed in Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details'. Monitoring of surface water shall be carried out at not less than two points, one upstream from the discharge location and one downstream.
- Details of monitoring of the receiving ground water should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed for the primary discharge point. Ground water monitoring locations upgradient and down gradient of the discharge point shall be screened for those substances listed in Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details'. Monitoring of ground water shall be carried out at not less than two points, one upgradient from the discharge location and one downgradient.
- For discharges from secondary discharge points Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed.
- Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other legislative standards. Submit a copy of the most recent water quality management plan or catchment management plan in place for the receiving water body.

Give details of any designation under any Council Directive or Regulations that apply in relation to the receiving surface or groundwater.

Existing Environment & Impact of Discharges

The receiving water Body of Inchigeelagh Waste Water Treatment System is the River Lee. All effluent from the treatment system is discharged via the primary discharge point into the River Lee. There are no discharges to ground or any other media.

The River Lee (Water Body Code IE_SW_19_1901, EPA River Code 19L03) is contained within Hydrometric Area 19. The River Lee rises approximately 6km west of Ballingeary village, in the mountainous terrain at Gougane Barra Lake. The River flows in an easterly direction through Ballingeary village, feeding Lough Allua before eventually discharging to Cork Harbour. The river is approximately 72km long The River Lee at Inchigeelagh is a fast – flowing river, which drains a large upland area including Gougane Barra Lake.

The River Lee has “Good” status and has been classified as being “Not at Risk” or strongly expected to achieve good status by 2015 under the Water Framework Directive Article 5 Characterisation (2004).

The 1998 Phosphorus Regulations set targets for phosphorus levels and biological quality (Q-values) for rivers and lakes. Where water quality is satisfactory it must be maintained and where water quality is unsatisfactory it must be improved. For levels of phosphorus the baseline Q-value determines the median molybdate-reactive phosphorus (MRP) to be achieved.

Water quality in the River Lee is monitored by the EPA in a number of different stations. EPA station 0100 Inchinossig Bridge, is located approximately 750m upstream of the discharge points. Water quality in this station had a Q4-5 value from 1986 to 2002. The Q-value dropped in 2005 to Q4 and has maintained that value in 2008.

EPA station 0200 at the Footbridge at Castlemasters, is located approximately 9km downstream of the Inchigeelagh Waste Water Treatment System discharge point. Water quality in this station has had a constant value of Q4 since 1999. The monitoring results are shown in **Table F1.1** below.

Biological Quality Ratings (Q Values)											
Station	1971	1976	1981	1986	1990	1994	1997	1999	2002	2005	2008
0100	5	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	4	4
0200	5	5	5	4-5	4-5	4	4-5	4	4	4	4

Table F1.1 EPA Monitoring Results

A biological Quality Rating of Q4 represents satisfactory water quality. Eutrophication is unlikely to occur in water bodies with a biological quality rating of Q4 or higher.

Schedule 5 of the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I. No. 272 of 2009) sets out “Criteria for Calculating Surface Water Ecological Status and Ecological Potential.” These are summarised for river water bodies in **Table F1.2** below.

Biological quality elements	Classification system	Ecological quality ratio	CCC Sampling Data Ambient Monitoring Point aSW-1d
		High-Good boundary	
		Rivers (All Types)	
Benthic invertebrate fauna	Quality rating system (Q-value)	0.85	
Phytobenthos	Trophic diatom index (TDI)	0.93	
Thermal conditions		River water body	CCC Sampling Data
Temperature		Not greater than 1.5°C rise in ambient temperature outside the mixing zone	
Oxygenation conditions		River water body	CCC Sampling Data
Biochemical Oxygen Demand (BOD) (mgO ₂ /l)		Good status ≤1.3 (mean) or ≤2.2(95%ile)	2
Dissolved oxygen lower limit		95%ile >80% Saturation	
Dissolved oxygen upper limit		95%ile <120% Saturation	
Acidification Status		River Water Body	CCC Sampling Data
pH (individual values)		Soft Water 4.5 < pH < 9.0 Hard Water 6.0 < pH < 9.0	6.9
Nutrient conditions		River Water body	CCC Sampling Data
Total Ammonia (mg N/l)		Good status ≤0.065 (mean) or ≤0.090 (95%ile)	<0.1 (Limit of Detection)
Molybdate Reactive Phosphorus (MRP) (mg P/l)		Good status ≤0.035 (mean) or ≤0.075 (95%ile)	<0.05 (Limit of Detection)

Table F1.2 Criteria for Calculating Surface Water Ecological Status and Ecological Potential

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

Cork County Council have monitored for the main polluting substances, as part of this application, as defined in the *Dangerous Substances Regulations, 2001 (S.I. No. 12/2001)*. The results are presented in **Attachment E**.

- 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.

There are 2 drinking water abstraction points on the River Lee. These are located downstream of the discharge points and are at Inniscarra Reservoir and at Lee Road Waterworks. These are approximately 38km and 51km respectively downstream of the primary discharge point. No mitigating measures are in place.

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

- (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive) —
- (i) notified for the purposes of Regulation 4 of the Natural Habitats Regulations, subject to any amendments made to it by virtue of Regulation 5 of those Regulations,
 - (ii) details of which have been transmitted to the Commission in accordance with Regulation 5(4) of the Natural Habitats Regulations, or
 - (iii) added by virtue of Regulation 6 of the Natural Habitats Regulations to the list transmitted to the Commission in accordance with Regulation 5(4) of those Regulations,
- (b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC¹ in accordance with the procedures laid down in Article 21 of that Directive,
- (c) a special area of conservation within the meaning of the Natural Habitats Regulations, or
- (d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC²;

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

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

Assessment of Relevant Legislation Applicable to Inchigeelagh Discharge

The following assesses the relevant European Union Directives and Irish Statutory Legislation that is applicable to the discharge standards at Inchigeelagh.

- 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 (Not applicable),
- Drinking Water Directives 80/778/EEC (Not applicable),
- Urban Waste Water Treatment Directive 91/271/EEC,
- Habitats Directive 92/43/EEC,
- Freshwater Fish Directive 2006/44/EC & Salmonid Regulations S.I. No. 293/1988
- Nitrates Directive 91/676/EEC
- Bathing Water Directive 76/160/EEC, and
- Shellfish Waters Directive 79/923/EEC.

Dangerous Substances Directive 2006/11/EC

Council Directive 2006/11/EC recognises the need for action to be taken by member states to protect the aquatic environment from pollution, in particular that caused by certain persistent, toxic and bioaccumulable substances. The discharge from Inchigeelagh is primarily from domestic sources. Cork County Council has monitored for the main polluting substances, as part of this application, as defined in the Dangerous Substances Regulations, 2001 (S.I. No. 12/2001). The results are presented in **Attachment E**.

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 water status by 2015. Cork County Council carried out some limited monitoring on the outlet flows to measure compliance against the relevant standards. Ambient monitoring was also carried out on the River Lee (for this application). Copies of the Water Quality Management Plans for this area has been included in **Attachment F**.

Birds Directive 79/409/EEC

The directive aims to conserve and manage populations of wild birds throughout Europe partly through the designation of Special Protection Areas (SPA) for birds and their habitats. The discharge point is not located within an SPA. The Gearagh SPA (Site Code 004109) is situated approximately 12km downstream of Inchigeelagh discharge point. The Gearagh is a natural reserve, a Ramsar Convention site and a Council of Europe Biogenetic Reserve. There are no imminent threats to the wintering birds populations. A site synopsis for the designation is included in **Attachment F**.

Groundwater Directives 80/68/EEC and 2006/118/EC

Not applicable as there are no emissions to groundwater.

Drinking Water Directive 801/68/EEC

In view of the importance for public health of water for human consumption, it is necessary to lay down quality standards with which such water must comply. There are 2 drinking water abstraction points on the River Lee. These are located downstream of the discharge points and are at Inniscarra Reservoir and at Lee Road Waterworks. These are approximately 38km and 51km respectively downstream of the primary discharge point. The most significant parameters, which may occur, are BOD, suspended solids, nitrates, ammonium, phosphates, total coliforms, faecal coliforms, faecal streptococci and salmonella. Given the distance between the proposed WWTP and the abstraction point at Inniscarra, it is extremely unlikely that the discharge will have any significant impact on water quality used for public water supply.

The Urban Waste Water Treatment Directive 91/271/EEC and Amendment Directive 98/15/EEC

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

Article 7 (a) states that "Member States shall ensure that, by 31 December 2005, urban waste water entering collecting systems shall before discharge be subject to appropriate treatment as defined in Article 2 (9) in the following cases:

- for discharges to fresh-water and estuaries from agglomerations of less than 2 000 PE.,
- for discharges to coastal waters from agglomerations of less than 10,000 PE."

Appropriate treatment is described as that which will allow compliance with other relevant Directives.

The combined PE of the Inchigeelagh agglomeration is 212.

Habitats Directive 92/43/EEC

The aim of this Directive is to contribute towards ensuring bio-diversity through the conservation of natural habitats and of wild fauna and flora.

Lough Allua, which is a proposed Natural heritage Area (Site Code 001065), is relatively rich in nutrients although acidic at times and supports a sparse marginal flora. In the eastern part of the lake there are rocky outcrops, which support a variety of species including pale dog violet, which is protected under the Flora Protection Order 1999. The lakeshore supports snipe, sedge warbler, lapwing and heron while great crested grebe, mallard and moorhen also nest. Small numbers of wintering mallard, tufted duck and teal also occur. Small populations of freshwater pearl mussel have been noted. Overall the area is considered important because of its diversity of habitats. The Gearagh proposed Natural Heritage area (Site Code 000108) is located approximately 9.5km downstream of the Inchigeelagh discharge point.

The Gearagh SAC (Site Code 000108) is situated approximately 9.5km downstream of Inchigeelagh and 1.5km south of Macroom. It extends for approximately 7km of the river and consists of a wide flat valley of the River Lee. This area represents the only extensive alluvial woodland in Western Europe, west of the Rhine and qualifies as a priority habitat under the European Habitats Directive. The uniqueness of this site is such that it has been designated as a statutory nature reserve and is internationally recognised via its designation as a Ramsar site and as a Biogenetic Reserve. A site synopsis for the designation is included in **Attachment F**.

Brown trout are found throughout the Lee system including Gougane Barra Lake and Lough Allua.

Freshwater Fish Directive 2006/44/EC & Salmonid Regulations S.I. No. 293/1988

The River Lee has been designated as a salmonid river under the European communities Regulation, 1988. Under these regulations monthly monitoring for a range of specified parameters is required and limits are specified for these parameters. The regulations carry some weight due to their strict limits and the consequent suitability of a watercourse for other uses should it meet these limits.

Nitrates Directive 91/676/EEC

Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources obliges member states to identify Nitrate Vulnerable Zones within which restricted agricultural practices will

apply. With respect to surface waters, the Directive notes that sensitive waters shall be identified where nitrate levels exceed the maximum concentration specified in the Surface Water Directive. The whole country is designated as a nitrate vulnerable zone; therefore the nitrate directive is applicable.

Bathing Water Directive 76/160/EEC

There are no designated bathing waters in the vicinity of the discharge.

EU Shellfish Waters Directive (79/923/EEC); and EU Directive on Health Conditions and the Placing on the Market of live Biovalve Molluscs (91/67/EEC) and associated amendments

There are no designated shellfish waters in the vicinity of the primary discharge.

Assimilative Capacity of the Receiving Water

As no upstream ambient sample was taken, the downstream ambient sample results were used instead.

Mass Balance Equation for Orthophosphates:

Median flow of River (SWRBD) = 3.0474m³/sec
Median OPO₄-P in River (downstream) = 0.05mg/l
Average volume of discharge = 0.00041m³/sec
Median value for OPO₄-P in discharge = 7.0mg/l

$$C_{\text{final}} = \frac{(3.0474 \times 0.05) + (0.00041 \times 7.0)}{(3.0474 + 0.00041)}$$

$$C_{\text{final}} = 0.0509\text{mg/l OPO}_4\text{-P}$$

The increase in Orthophosphate due to the discharge at Inchigeelagh is 0.0009mg/l.

Mass Balance Equation for BOD:

Flow of River (95%ile) = 0.4518m³/sec
Median BOD in River (downstream) = 2.0mg/l
Average volume of discharge = 0.00041m³/sec
Median value for BOD in discharge = 300.0mg/l

$$C_{\text{final}} = \frac{(0.4518 \times 2.0) + (0.00041 \times 300)}{(0.4518 + 0.00041)}$$

$$C_{\text{final}} = 2.27\text{mg/l BOD}$$

The increase in BOD due to the discharge at Inchigeelagh is 0.27mg/l.

Mass Balance Equation for Suspended Solids:

Flow of River (95%ile) = 0.4518m³/sec
Median SS in River (downstream) = 3.0mg/l
Average volume of discharge = 0.00041m³/sec
Median value for SS in discharge = 350mg/l

$$C_{\text{final}} = \frac{(0.4518 \times 3.0) + (0.00041 \times 350)}{(0.4518 + 0.00041)}$$

$C_{\text{final}} = 3.315\text{mg/l}$ Suspended Solids

The increase in Suspended Solids due to the discharge at Inchigeelagh is 0.315mg/l.

Mass Balance Equation for Total Phosphates:

Median Flow of River (SWRBD) = $3.0474\text{m}^3/\text{sec}$
Median TP-P in River (downstream) = 0.05mg/l
Average volume of discharge = $0.00041\text{m}^3/\text{sec}$
Median value for TPO4-P in discharge = 12.0mg/l

$$C_{\text{final}} = \frac{(3.0474 \times 0.05) + (0.00041 \times 12.0)}{(3.0474 + 0.00041)}$$

$C_{\text{final}} = 0.0516\text{mg/l}$ Total Phosphates

The increase in Total Phosphates due to the discharge at Inchigeelagh is 0.0016mg/l.

Mass Balance Equation for Total Nitrogen:

Flow of River (95%ile) = $0.4518\text{m}^3/\text{sec}$
Median Total Nitrogen in River (downstream) = 0.79mg/l
Average volume of discharge = $0.00041\text{m}^3/\text{sec}$
Median value for Total Nitrogen in discharge = 85.0mg/l

$$C_{\text{final}} = \frac{(0.4518 \times 0.79) + (0.00041 \times 85.0)}{(0.4518 + 0.00041)}$$

$C_{\text{final}} = 0.866\text{mg/l}$ Total Nitrogen

The increase in Total Nitrogen due to the discharge at Inchigeelagh is 0.076mg/l.

Mass Balance Equation for Sulphates:

Flow of River (95%ile) = $0.4518\text{m}^3/\text{sec}$
Median Sulphates in River (downstream) = 30.0mg/l
Average volume of discharge = $0.00041\text{m}^3/\text{sec}$
Median value for Sulphates in discharge = 30.0mg/l

$$C_{\text{final}} = \frac{(0.4518 \times 30.0) + (0.00041 \times 30.0)}{(0.4518 + 0.00041)}$$

$C_{\text{final}} = 30.0\text{mg/l}$ Sulphates

The increase in Sulphates due to the discharge at Inchigeelagh is 0.0mg/l.

Mass Balance Equation for Ammonia-N:

Flow of River (95%ile) = $0.4518\text{m}^3/\text{sec}$
Median Ammonia in River (upstream) = 0.1mg/l
Average volume of discharge = $0.00041\text{m}^3/\text{sec}$
Median value for Ammonia in discharge = 60.0mg/l

$$C_{\text{final}} = \frac{(0.4518 \times 0.1) + (0.00041 \times 60.0)}{(0.4518 + 0.00041)}$$

$$C_{\text{final}} = 0.154\text{mg/l Total Ammonia}$$

The increase in Ammonia due to the discharge of Inchigeelagh is 0.054mg/l.

- 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_SE RVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
SW_Lee288Main _Lee_Lower,LWB : Inniscarra Reservoir	Cork Harbour and City	35323	-	38000	153489	072309	N
SW_Lee288Main Lee_1Lower	Cork City	49600	-	51000	164738	071444	N

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

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

Attachment F.2 should contain any supporting information.

SECTION G: PROGRAMMES OF IMPROVEMENTS

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

G.1 Compliance with Council Directives

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

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

Not Applicable as there is no programme of improvements planned.

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).

Not Applicable as there is no programme of improvements planned. The water quality management plan is included in **Attachment F**. There is no catchment management plan in place, only the Draft River Basin Management Plan for the South Western River Basin District (December 2008).

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

Attachment included	Yes	No
		✓

G.3 Impact Mitigation

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

Not Applicable as there is no programme of improvements planned.

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 as there is no programme of improvements planned.

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

Attachment included	Yes	No
		✓

SECTION H: DECLARATION

Declaration

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

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

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

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

Signed by : _____
(on behalf of the organisation)

Date : _____

Print signature name: _____

Position in organisation: _____

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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.

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Section A

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B2_Map4(Location Plan of WWTP)
B3_Map5(Location Of Primary Disc Pt)
B4_Map6_(Location of Secondary Dis Pt)
B5_Map7(Location of Storm Water Overflow)

Section C

No Attachments

Section D

D1_Map8(Location of WWTP & Discharge Point.)Carrigleigh
Attachment D1 Carrigleigh Estate Discharge Licence 161209

Section E

Attachment E2 CCC Inniscarra Lab Accreditation 240809
Attachment E4 Inchigeela Analytical Data 161209

Section F

Attachment F1 Gearagh SAC Site Synopsis 171109
Attachment F1 Gearagh SPA Site Synopsis 161109
Attachment F1 River Lee Report WFD 161109

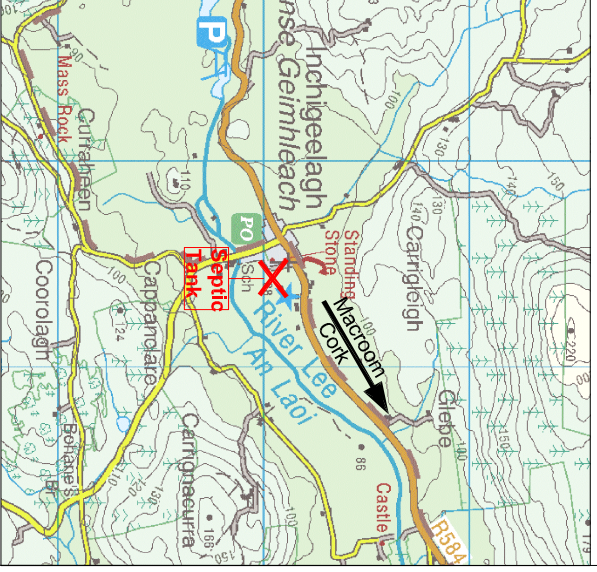
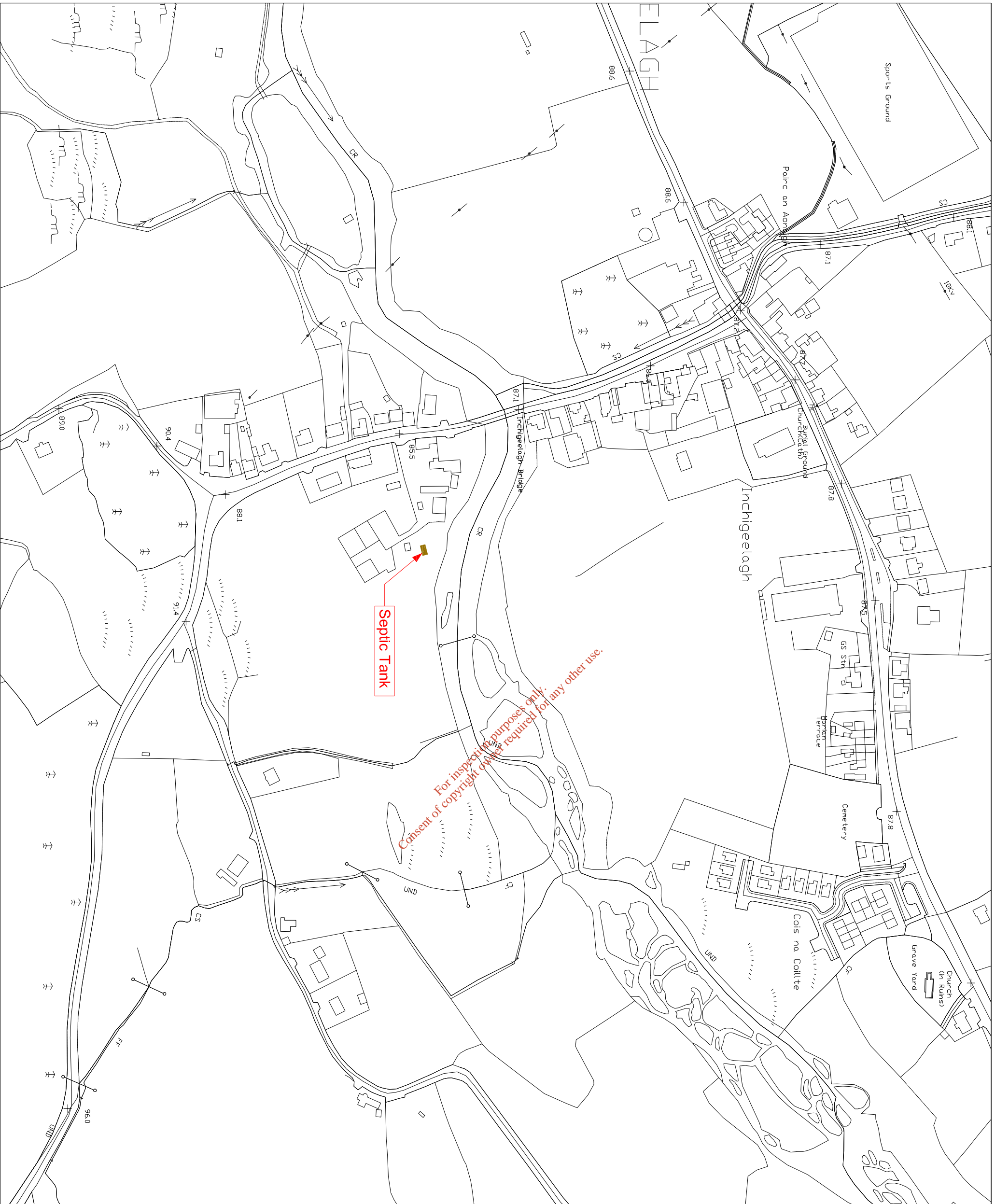
Section G

No Attachments

Online Data

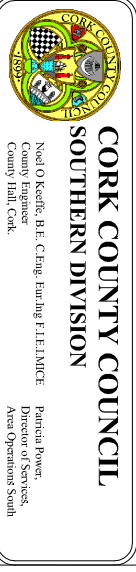
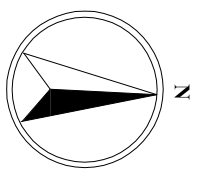
Online Tables Inchigeelagh 161209

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Key Map
Not to Scale
OS Number 1206

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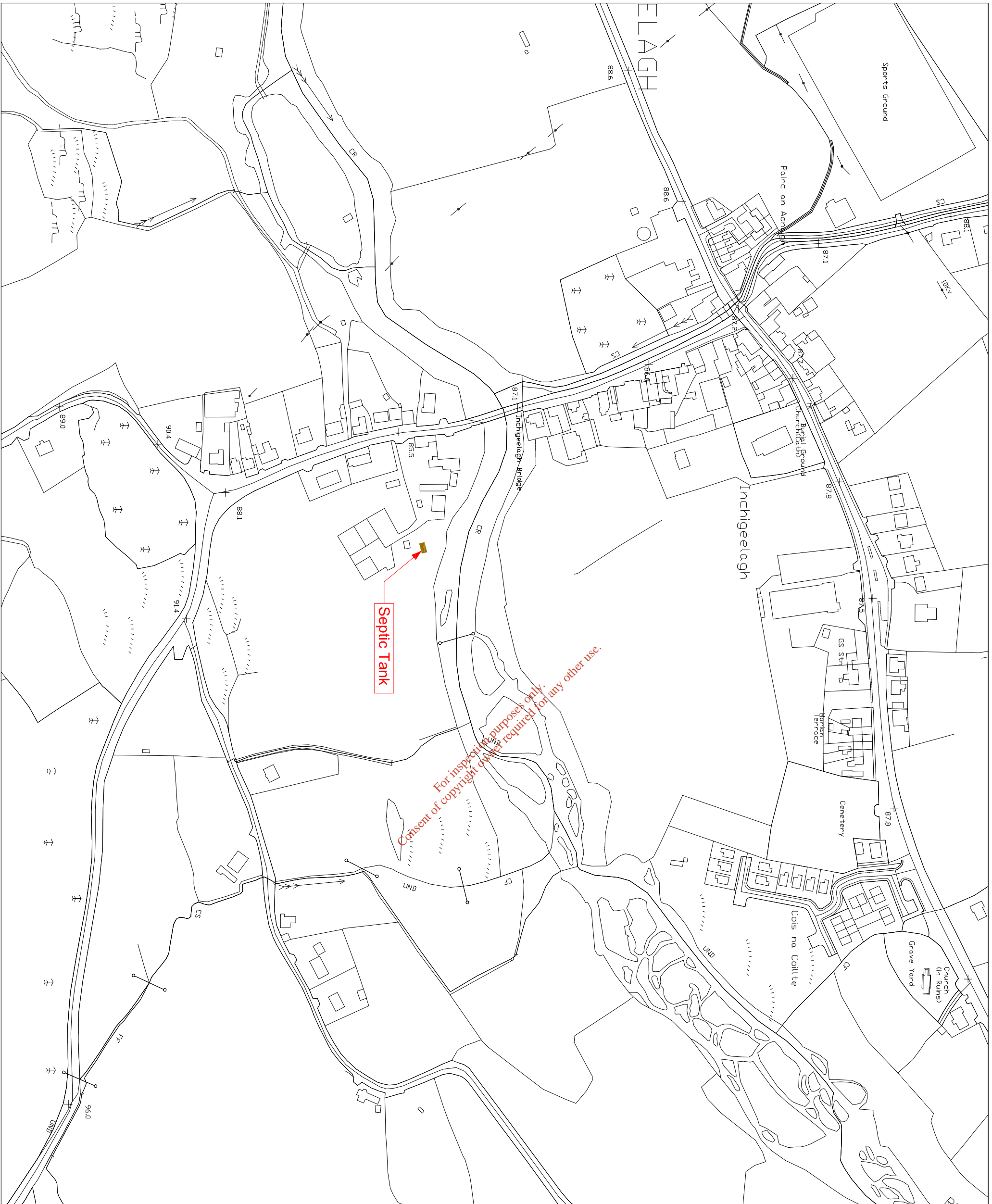


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SOUTHERN DIVISION
Noel O Keefe, B.E. Chief Executive
County Hill, Cork.
Patricia Power,
County Engineer
Director of Services,
Aire Operations South

Project: **INCHIAGEELAGH WWTP**
WASTE WATER
DISCHARGE LICENCE APPLICATION

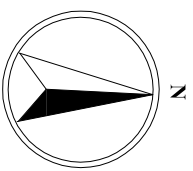
Title: Application Form
Attachment A1_Map1
Location Plan of Waste Water Treatment Plant

Designed: CB	Checked: MH	Scale: 1:3,000 @ A3	Drawing No: A1_Map1
Drawn: MM	Approved: MH	Date: Nov 09	Rev: 0
File Path:	Status: _		



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Rev.	Date	By	Description

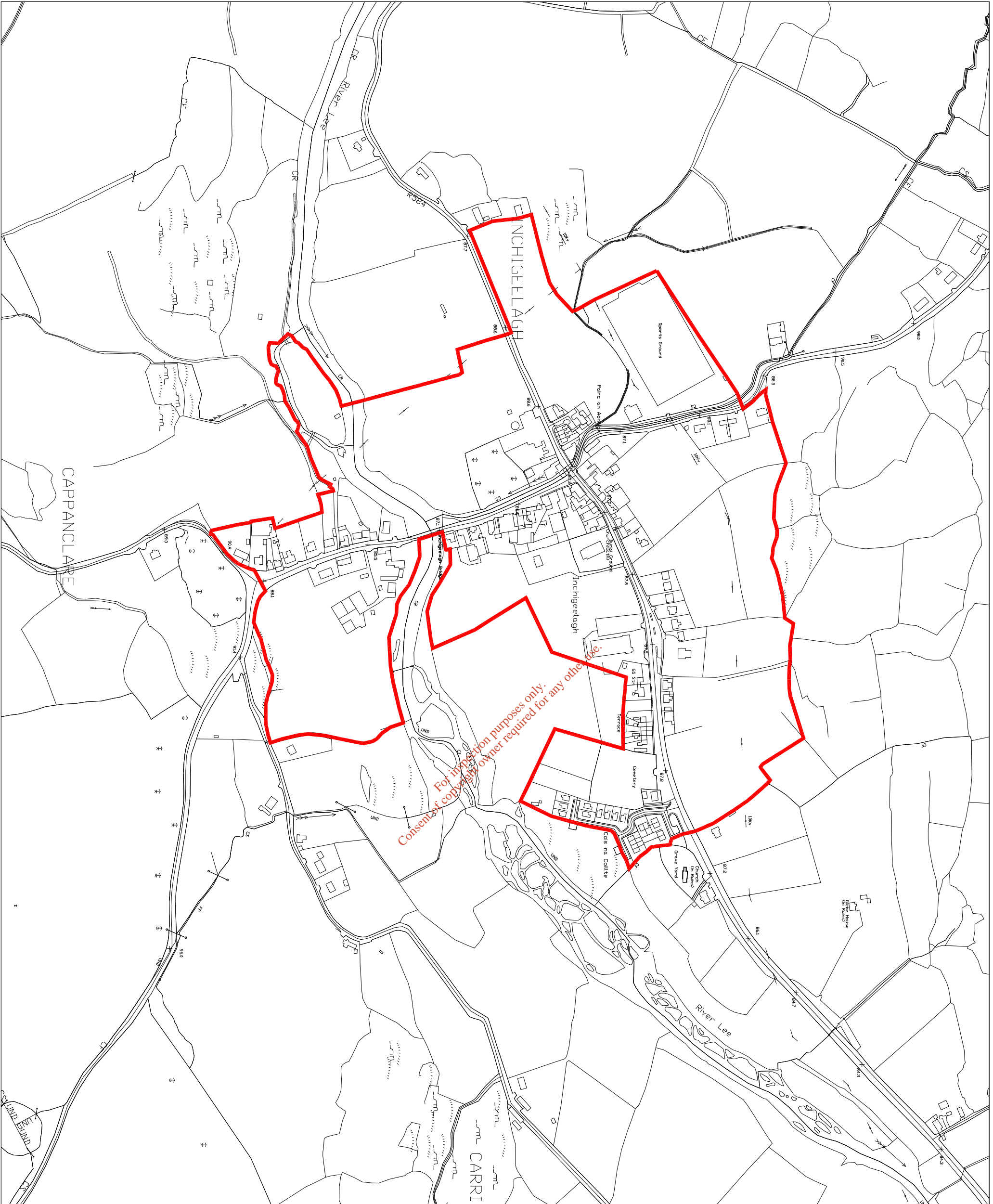


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 County Hill, Cork.
 Patricia Power,
 Director of Services,
 Area Operations South

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WASTE WATER
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Title: **Application Form**
Attachment A1_Map2
Location Plan of Waste Water Treatment Plant

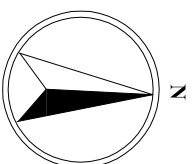
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**AGGLOMERATION
BOUNDARY**



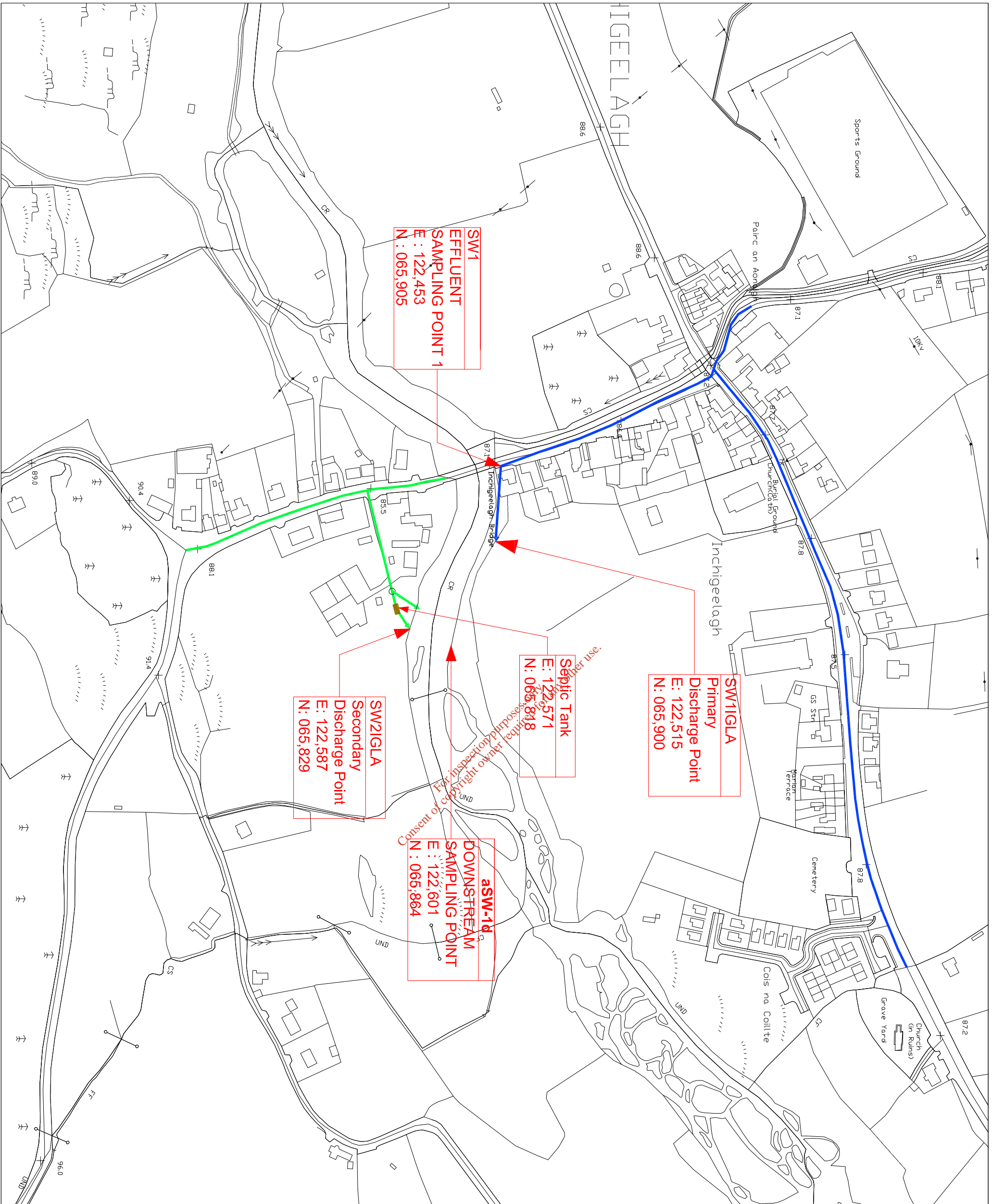
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County Hall, Cork.
Patricia Power,
Director of Services,
Area Operations South

Project: **INCHIGEELAGH WWTP
WASTE WATER
DISCHARGE LICENCE APPLICATION**

Title: **Application Form
Attachment B1_Map3
Agglomeration Boundary Served By
Waste Water Treatment Works**

Designed: CB	Checked: MH	Scale: 1:5,000 @ A3	Drawing No: B1_Map3
Drawn: NM	Approved: MH	Date: Nov 09	Status: 0
File Path:			Rev: 0

Rev	Date	By	Description



SW1
EFFLUENT
SAMPLING POINT 1
 E : 122,453
 N : 065,905

SW11G1A
Primary
Discharge Point
 E : 122,515
 N : 065,900

Séptic Tank
 E : 122,571
 N : 065,848

SW21G1A
Secondary
Discharge Point
 E : 122,587
 N : 065,829

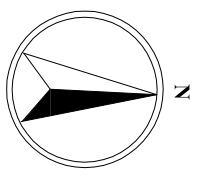
aSW-1d
DOWNSTREAM
SAMPLING POINT
 E : 122,601
 N : 065,864

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NORTHERN CATCHMENT
SOUTHERN CATCHMENT

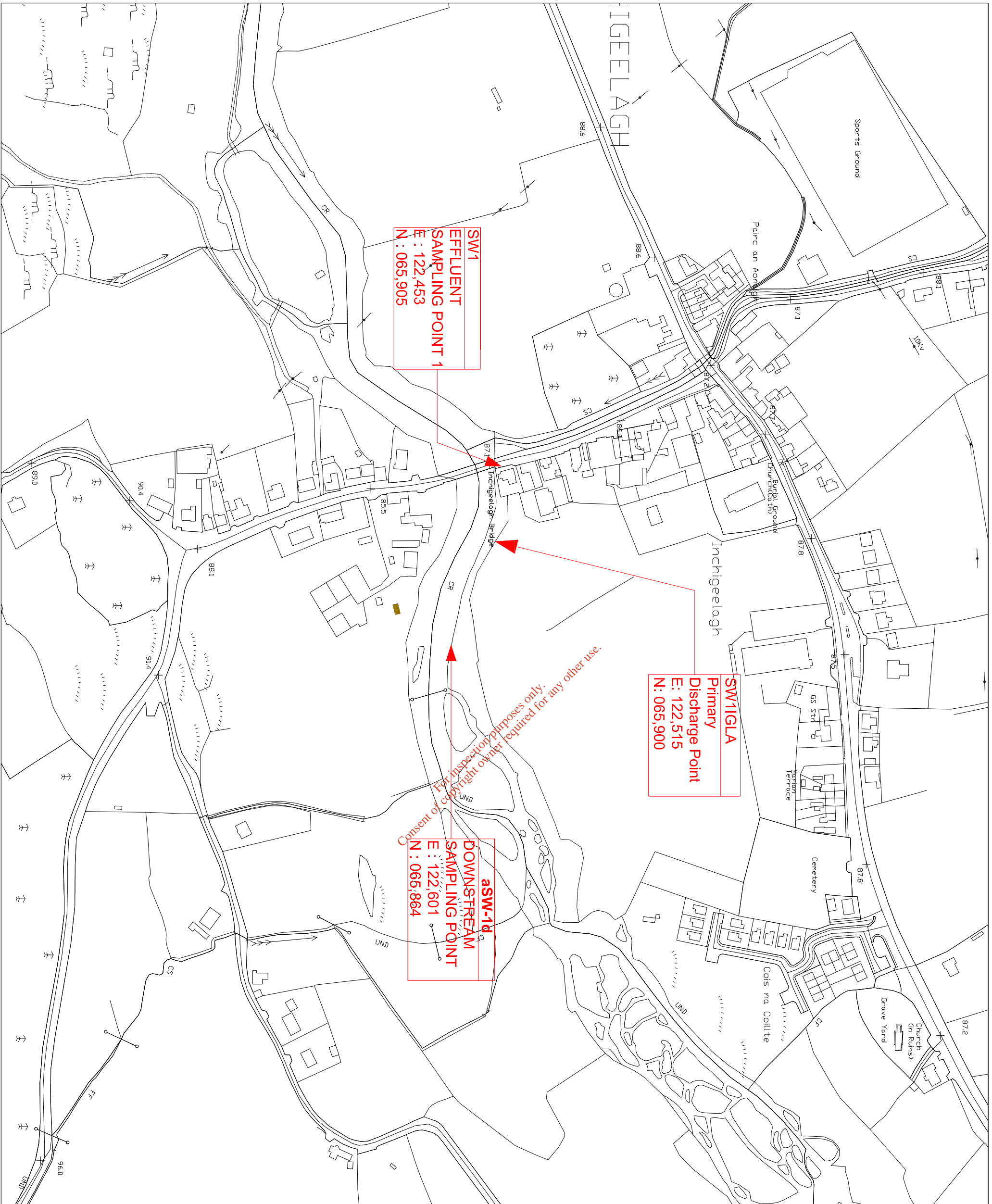


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 Director of Services,
 Area Operations South

Project: **INCHIGEELAGH WWTP**
WASTE WATER
DISCHARGE LICENCE APPLICATION

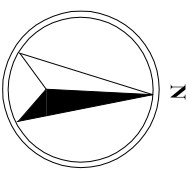
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Attachment B2_Map4
Location Plan of Waste Water Treatment Plant

Designed: ER	Checked: MH	Scale: 1:3,000 @ A3	Drawing No: B2_Map4
Drawn: MM	Approved: MH	Date: Nov 09	Status: 0



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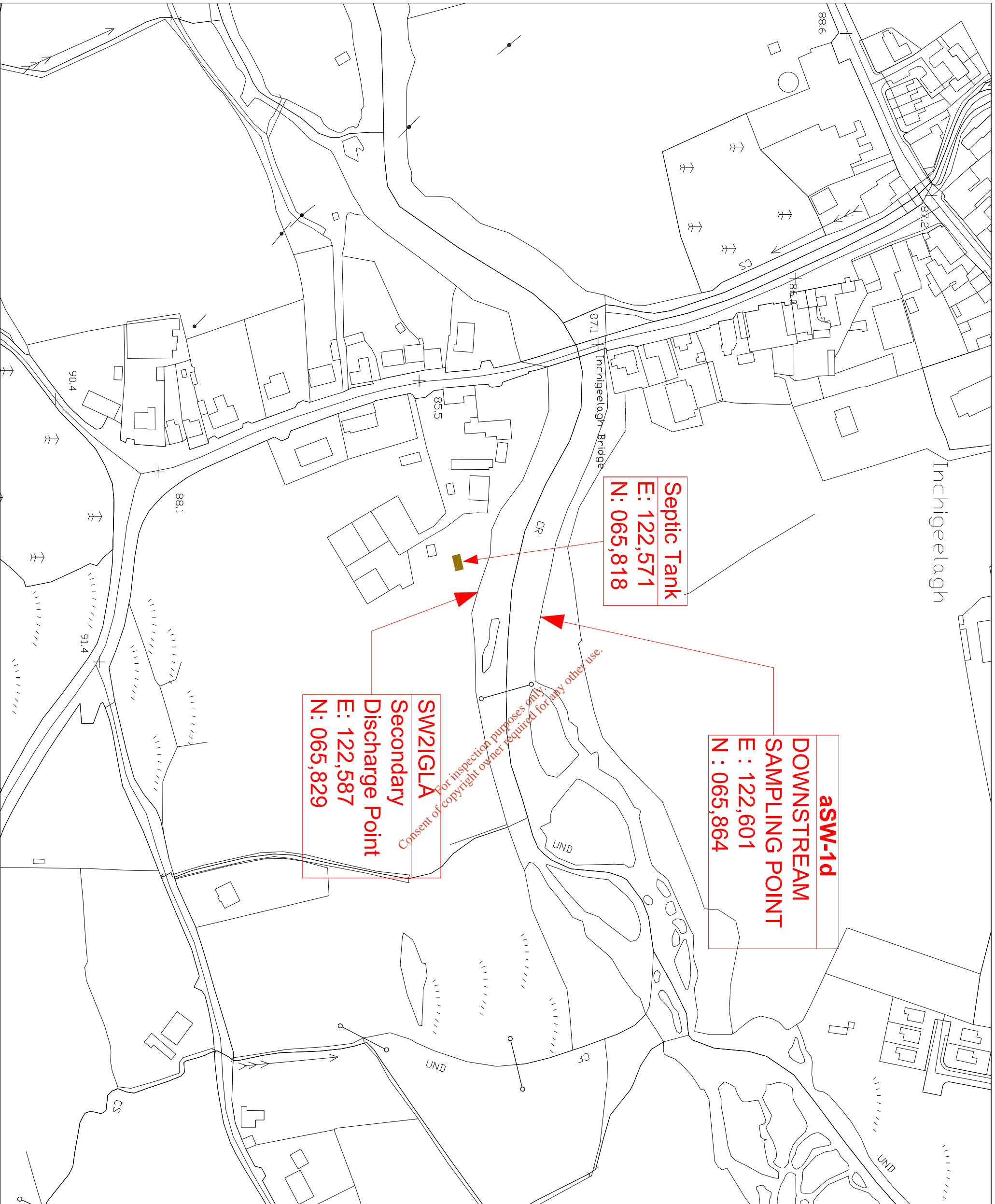


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SOUTHERN DIVISION
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County Engineer
County Hall, Cork.
Patricia Power,
Director of Services,
Area Operations South

Project: **INCHIGEELAGH WWTP**
WASTE WATER
DISCHARGE LICENCE APPLICATION

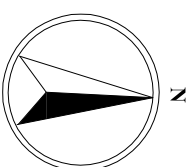
Title: **Application Form**
Attachment B3_Maps
Location of Primary Discharge Point

Designed: CB	Checked: MH	Scale: 1:3,000 @ A3	Drawing No: B3_Maps
Drawn: NM	Approved: MH	Date: Nov 09	Status: 0
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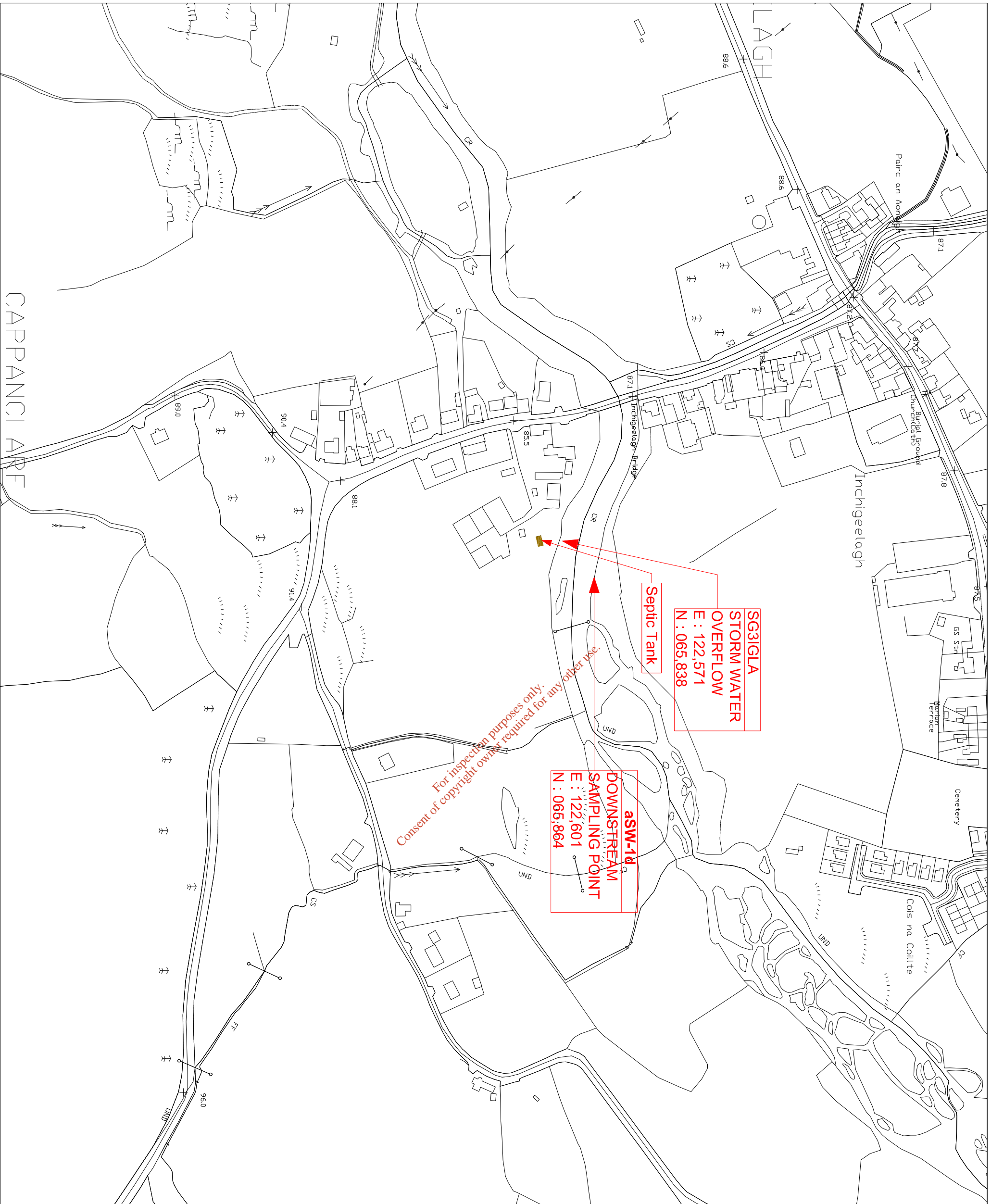
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Project: **INCHIGEELAGH WWTP**
WASTE WATER
DISCHARGE LICENCE APPLICATION

Title: **Application Form**
 Attachment B4_Map6
 Location of Secondary Discharge Point

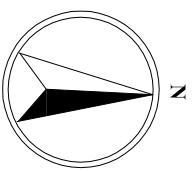
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Drawn: MM	Approved: MH	Date: Nov 09	Status: 0
File Path:			Rev: 0

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 County Hall, Cork.
 Patricia Power,
 Director of Services,
 Area Operations South

Project: **INCHIGEELAGH WWTP**
WASTE WATER
DISCHARGE LICENCE APPLICATION

Title: **Application Form**
Attachment B5_Map7
Location Plan of Storm Water Overflow

Designed: CB	Checked: MH	Scale: 1:3,000 @ A3	Drawing No: B5_Map7
Drawn: NM	Approved: MH	Date: Nov 09	Status: 0
File Path:			

CORK COUNTY COUNCIL

LOCAL GOVERNMENT (WATER POLLUTION) ACTS 1977 AND 1990

Licence to discharge Trade Effluent or Sewage Effluent to Waters

Reference TO / JMT & Associates Ltd
No. In No 1 Castle Close
WP(W)17/05 BLARNEY
Co Cork

The Council of the County of Cork, in exercise of the powers conferred on it by the Local Government (Water Pollution) Acts, 1977 and 1990, as amended, hereby **GRANTS**

a Licence, Reference Number WP(W)17/05

To **JMT & Associates Ltd**
No 1 Castle Close
BLARNEY
Co Cork

To Discharge domestic effluent from housing development

To (River) **groundwaters**

Located at **Carrigleigh, Inchigeela Co Cork**

subject to the Conditions set out in the schedule attached hereto. It should be noted that a person shall not be entitled solely by reason of a licence to make, cause or permit a discharge to a sewer.

Signed on behalf of the said Council,

**ENVIRONMENT
DEPARTMENT,
ROOM GF22,
CORK COUNTY COUNCIL,
INNISCARRA,
CO CORK.**

IneHC Lund
STAFF OFFICER

Dated this 3 day of March 2006

NOTE:

An appeal against a decision made by a Sanitary Authority under Section 16 and Section 17 of the Act of 1977, may be made to An Bord Pleanala under Section 20 of the Act, as inserted by Section 15 of the Local Government (Water Pollution) (Amendment) Act, 1990 within one month of the date of the Licence.

Appeals should be addressed to **THE SECRETARY, AN BORD PLEANALA,**
64 Marlborough Street, Dublin 1, and will be invalid unless accompanied by an additional fee of €126.00.

A request for an oral hearing shall be accompanied by an additional fee of €63.00.

A party to an appeal shall give to An Bord Pleanala any document, information or evidence in his possession or procurement, which An Bord Pleanala consider necessary for the purpose of determining the appeal.

CORK COUNTY COUNCIL
Environment Dept.

Local Government Water Pollution Act 1977/1990
Licence under Section 4

W.P. (W) 17/05

JMT & Associates.
Carrigleigh
Inchigeelagh
Co. Cork

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Schedule

Wastewaters Discharges shall take place only as specified in the licence application W.P.(W) 17/05 as modified and/or controlled by this licence and subject to the requirements of law. Any changes in the nature or quantity of any emission shall require the licensee to notify the Licensing Authority and in the case of any material change for the licensee to request a review or obtain a new licence as may be determined by the Licensing Authority prior to any such change being made. The Licensing Authority shall interpret whether any change is material or not.

This licence supersedes all previous licences and correspondence issued in respect of the facility under the terms of the Local Government Water Pollution Act 1977 and 1990.

1. WASTEWATER MANAGEMENT

1.1 The Licensee shall employ the best available techniques in the avoidance, minimisation, treatment and disposal of wastewaters produced on site.

1.2 Standard operating procedures shall be prepared in respect of wastewater control and treatment systems to assist personnel with responsibilities for the operations of such systems and plant. These procedures shall be retained on site for inspection and submitted to the Licensing Authority on request. Operators with responsibilities in the effluent control and treatment area shall be identified to the Licensing Authority and contact telephone numbers supplied. Operators with responsibilities in the wastewaters control and treatment shall be trained adequately to enable them to execute their tasks in relation to pollution control. These records shall be submitted to the Licensing Authority prior to the commencement of discharges.

2. CONTAMINATED WASTE WATERS.

2.1 All contaminated wastewater arising from the operation of a housing development at Carrigeigh, Inchigeelagh, Co. Cork, shall be collected and treated on site prior to discharge to groundwater. The specification of the treatment system is to be agreed with the Local Authority.

2.2 Contaminated wastewater shall comprise of those arising from the operation of the above named development only.

2.3 The plant shall not be operated without an ongoing maintenance contract which must be approved by the licencing authority

2.4 No interference with adjacent wetlands or vegetation shall take place without the prior approval of Cork County Council or South Western Regional Fisheries Board

2.5 All treated effluent shall be discharged to the percolation system prior to discharge as outlined in the licence application and maps/ drawings submitted with the application
The outflow pipe from the treatment unit shall be fitted with a sampling chamber post treatment at a location agreed with the Licensing Authority. The sampling chamber shall be constructed with minimum dimensions 500mm square by 400 mm deep. A flow meter shall be installed on the treated wastewater discharge line and the location of the flow meter shall be agreed with the Licensing Authority. The flow meter and sampling chamber shall be fully operational and in use at all times when wastewater is being discharged. The flow meter shall be of the continuous recording and integrating type. There shall be safe and accessible access to the sampling chamber and discharge location to the satisfaction of the Licencing Authority.

Grab samples obtained from the sampling chamber prior to percolation shall be tested by the licensee for the parameters indicated in the following table and no such sample taken at the point of sampling shall exceed the following condition limits from the date of issue of this licence. The limits set are from the treatment plant prior to discharge to percolation and all sampling and monitoring will be evaluated at this point

2.6 The wastewater flow shall not exceed 25 m³/day or 4 m³ per hour.

2.7 Grab samples obtained from these shall be tested by the licensee for the parameters indicated in the following table and no such sample taken at the point of sampling in the discharge line shall exceed the following condition limits.

pH	6.0 – 8.5
Temperature	25° C
B.O.D.	20mg/l
Total Suspended Solids	30 mg/l
Oils, fats, greases	<5 mg/l
Detergents (anionic, cationic and nonionic)	5 mg/l
Total Phosphorus as Phosphorus	2.0 mg/l
Ortho Phosphate as Phosphorus	1.0 mg/l
Ammonia as Nitrogen	5 mg/l

This licence does not permit the discharge of compounds listed (appendix 1) on Water Quality (Dangerous Substances Regulations) S.I. 12, 2001 from any activity arising on this site.

The frequency of testing for the above parameters shall be as follows:

Monthly for all parameters except detergents and Fats Oil & Grease for the first twelve months from the date of issue of this licence. Bimonthly thereafter for all parameters except detergents and Fats Oil & Grease, if the previous twelve months data demonstrates 100% compliance with condition 2.7 above.

Detergents and Fats Oil & Grease are to be analysed twice yearly for the duration of this licence. The Licensing Authority reserves the right to alter the frequency of testing.

Licensing Authority reserves the right to alter the frequency of testing. In compliance with Statutory Instrument S.I. 258 of 1998, the licensee shall report to the Licensing Authority on the reduction or elimination of detergents containing phosphorus compounds. This report shall be submitted by 1st December 2007

2.8 All test methods used by the Licensee for the monitoring of the nature of the discharge shall be agreed with the Licensing Authority. All laboratory equipment used for wastewaters monitoring shall be calibrated in accordance with the manufacturers' recommendations and all records of such calibrations shall be held by the Licensee for inspection by the Licensing Authority upon request.

2.9 In the event of malfunction or breakdown of the wastewater treatment systems, or, any other incident on site which may be rise to water pollution, the Licensee shall immediately report the incident to the Licensing Authority by telephone or telefax and shall confirm the communication in writing within twenty four hours.

3. SURFACE AND STORM WATERS

3.1 All uncontaminated surface and storm waters shall be discharged as agreed with the Licensing Authority and discharged to the surface water drain as indicated on drawing number CM 01 which accompanied the application.

3.2 Grab samples shall be tested by the licensee upon request for the parameters indicated below table and no such sample taken at the point of sampling in the discharge lines shall exceed the following condition limits from the 31st January 2006:-

pH	6.0 – 8.0
Temperature	ambient
B.O.D.	5.0 mg/l
Total Suspended Solids	30 mg/l

4. STORAGE FACILITIES

4.1 All chemical storage tanks areas shall be rendered impervious to the materials stored therein. In addition, storage tank areas shall be bunded, either locally or remotely, to a volume of 110% of the largest tank within each individual bunded area.

4.2 The integrity and watertightness of all the bunded structures and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated by the licensee to the satisfaction of the Licensing Authority. The results of these tests shall be certified by a Chartered Engineer.

5. SOLID WASTES

5.1 All wastes shall be recycled, recovered, or, reused in so far as is practical.

5.2 All waste management options utilised shall be agreed in advance with the Licensing Authority. The volume of all wastes generated on site shall be recorded by the licensee. All such wastes shall be detailed as to source, route and type of recycling or disposal and classification under the European Waste Catalogue. This information shall be included in the annual summary report which must be returned to the Licensing Authority under the terms of this licence.

5.3 All treatment plant sludges shall be stabilised prior to disposal or alternative proposals may be submitted for disposal.

5.4 The licensee shall submit a report detailing all issues related to storage, handling and disposal of treatment plant sludge's. This report shall be approved by the licencing authority prior to disposal of any plant sludge's and no sludge may be removed off site for disposal until this approval has been granted.

5.5 The licensee shall submit the name of the licenced waste disposal contractors as part of 5.4 above and only licenced operators may be used in this regard..

6. MONITORING

6.1 The licensee shall grant immediate and unhindered access to the site and any portion of the wastewaters treatment plant to any authorised personnel representing any body having statutory responsibility for water pollution control, at all times to carry out such inspections, monitoring and investigations as the body deems necessary.

The Licensing Authority reserve the right to carry out monitoring works on the Licensee's site in relation to the nature or quantity of discharges from the licensee's premises. The Licensing Authority may install such equipment as may be necessary to collect this information at the Licensee's premises. The cost of this work will be borne by the Licensee.

6.2 The licensee shall keep records of all monitoring carried out and shall retain such records for a minimum period of five years. These records shall be available for inspection by authorised personnel representing any statutory body involved in water pollution at all reasonable times. The licensee shall submit to the Licensing Authority at quarterly intervals the results of all monitoring relating to the previous quarter, together with any other records relating to pollution control which may be required by the Licensing Authority. The format of these results shall be in accordance with the Licensing Authority template which will be provided to the licensee.

6.3 Any non-compliance with the terms of the licence shall be highlighted and the reason why this occurred shall be stated. The measures taken to ensure non-recurrence of the non compliance shall also be outlined. The percentage compliance with licence values for each parameter shall also be indicated.

6.4 Before January 31st of each calendar year, the Licensee shall submit a summary report of all monitoring carried out in the previous year. This report shall evaluate the operation of the facilities available on site to treat the wastewaters produced in the light of the results achieved in the previous year.

6.5 All monthly/quarterly and annual reports shall be signed by the Licensee's plant manager or approved agent designated by licensee

6.6 The Licensee shall carry out a visual inspection of the wastewaters and surface water discharge points weekly and any abnormalities in water quantity shall be noted. If it appears that the abnormalities may be occurring as a result of the Licensee's discharge, then the Licensee shall immediately notify the Licensing Authority and initiate an investigation into the possible cause of the abnormalities.

7. RESPONSIBLE PERSON

7.1 The licensee shall ensure that a person or persons is/are available at all times to give relevant information on emissions to the Licensing Authority. The licensee shall identify to the Licensing Authority each such person and confirm in writing the contact details of such persons.

8. TREATMENT SYSTEM

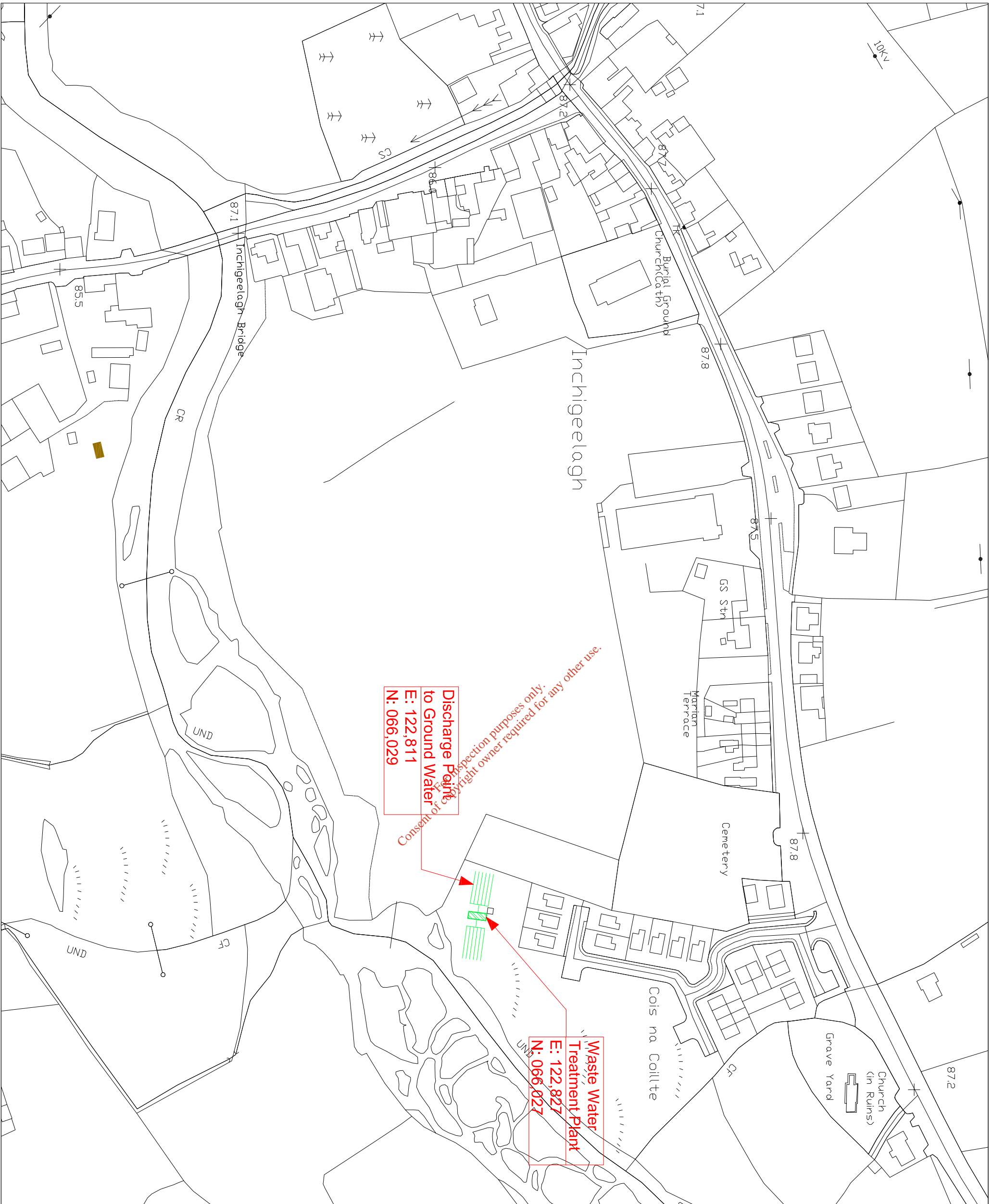
8.1 The Licensee shall initiate an approved maintenance programme for all such plant in use in the treatment process or in pollution control. A copy of the contract documents of the company contracted to operate and maintain the treatment plant shall be forwarded to the local authority prior to the operation of the plant.

- As a minimum the following conditions shall be performed
- Three times weekly inspection of the plant and a log maintained, verifying the operational conditions of the plant during the visit
 - Alarm systems which relay to a responsible contact person should any plant mal function occur or a breakdown of plant equipment take place in the effluent system
 - Register of maintenance work

- The plant shall be checked after every period of excessive rainfall in order to ensure that the system has not been affected by flooding.
- a. All pump sumps or other treatment plant chambers from which spillages might occur shall be fitted with high level liquid alarms. The alarm systems shall relay to a responsible contact person for the site. Containment areas around pump sumps shall be put in place and all spillages diverted to the effluent treatment plant for treatment
 - b. Noise levels shall be controlled and in accordance with Environmental Protection Agency guidelines
 - c. There shall be no nuisance odour outside the plant boundary. Odour abatement shall be managed through a structured monitoring and management of the operation of the wastewater treatment plant
- A register shall be retained on site of all maintenance work and inspections carried out on such units and this information shall be made available to the Licensing Authority either on request or available for inspection on site.

9. CONTRIBUTIONS

- 9.1 The licensee shall pay to the Licensing Authority such annual contributions towards the cost of monitoring the discharge as the Licensing Authority considers necessary for the performance of its duties under this Act as follows:-
- (a) Not later than September 30th, 2006 the licensee shall pay to the Licensing Authority a contribution of not less than (€ 1100)
 - (b) In subsequent years the licensee shall pay to the Licensing Authority an annual amount of not less than (€ 1100) updated in accordance with the Consumer Price Index from the date of the grant of this licence to the value pertaining at the time of payment of each annual contribution.
 - (c) Notwithstanding the foregoing, the rate of contribution each year shall take account of the actual costs of monitoring as incurred by the Licensing Authority in the previous year and as estimated for the next year.



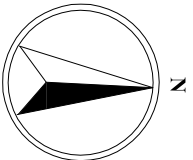
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Discharge Point to Ground Water
E: 122,811
N: 066,029

Waste Water Treatment Plant
E: 122,827
N: 066,027

NOTES:

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3. All levels refer to Ordnance Survey Datum, Malin Head.
4. DO NOT SCALE, use figured dimensions only, if in doubt ask.



CORK COUNTY COUNCIL
SOUTHERN DIVISION
Noel O Keefe, B.E. Chief Executive
County Engineer
County Hill, Cork.
Patricia Power,
Director of Services,
Area Operations South

Project: **INCHIGEELAGH WWTP**
WASTE WATER
DISCHARGE LICENCE APPLICATION

Title: Application Form
Attachment D1_Map8
Location Plan of Waste Water Treatment Plant
& Discharge Point

Designed: CBN	Checked: MH	Scale: 1:2,000 @ A3	Drawing No: D1_Map8
Drawn: MM	Approved: MH	Date: Nov 09	Status: 0
File Path:			Rev: 0

Rev	Date	By	Description

Accreditation Certificate

Cork County Council

Wastewater Testing Laboratory, Inniscarra, Co. Cork

Testing Laboratory

Registration number: 016T

is accredited by the Irish National Accreditation Board (INAB) to undertake testing as detailed in the Schedule bearing the Registration Number detailed above, in compliance with the International Standard ISO/IEC 17025:2005 2nd Edition "General Requirements for the Competence of Testing and Calibration Laboratories" (This Certificate must be read in conjunction with the Annexed Schedule of Accreditation)

Date of award of accreditation: 01:10:2002

Date of last renewal of accreditation: 20:09:2007

Expiry date of this certificate of accreditation: 01:10:2012

This Accreditation shall remain in force until further notice subject to continuing compliance with INAB accreditation criteria, ISO/IEC 17025 and any further requirements specified by the Irish National Accreditation Board.

Manager: Tom Dempsey

Mr Tom Dempsey

Chairperson: Maire Walsh

Dr Máire Walsh

Issued on 23 June 2008

Organisations are subject to annual surveillance and are re-assessed every five years. The renewal date on this Certificate confirms the latest date of renewal of accreditation. To confirm the validity of this Certificate, please contact the Irish National Accreditation Board.

The INAB is a signatory of the European co-operation for Accreditation (EA) Testing Multilateral Agreement (MLA) and the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement.

Schedule of Accreditation



(Annex to Accreditation Certificate)

Permanent Laboratory:

Category A

CORK COUNTY COUNCIL

Chemistry Testing Laboratory

Initial Registration Date : 25-April-1991
Postal Address: Waste Water Laboratory
(Address of other locations as they apply) Inniscarra
Co. Cork
Telephone: +353 (21) 4532700
Fax: +353 (21) 4532777
E-mail:
Contact Name: Ms M Cherry
Facilities: Normally not available for Public testing

Schedule of Accreditation



Permanent Laboratory:
Category A

THE IRISH NATIONAL ACCREDITATION BOARD (INAB) is the Irish body for the accreditation of organisations including laboratories.

Laboratory accreditation is available to testing and calibration facilities operated by manufacturing organisations, government departments, educational institutions and commercial testing/calibration services. Indeed, any organisation involved in testing, measurement or calibration in any area of technology can seek accreditation for the work it is undertaking.

Each accredited laboratory has been assessed by skilled specialist assessors and found to meet criteria which are in compliance with ISO/IEC 17025 or ISO/IEC 15189 (medical laboratories). Frequent audits, together with periodic inter-laboratory test programmes ensure that these standards of operation are maintained.

Testing and Calibration Categories:

- Category A:** Permanent laboratory calibration and testing where the laboratory is erected on a fixed location for a period expected to be greater than three years.
- Category B:** Site calibration and testing that is performed by staff sent out on site by a permanent laboratory that is accredited by the Irish National Accreditation Board.
- Category C:** Site calibration and testing that is performed in a site/mobile laboratory or by staff sent out by such a laboratory, the operation of which is the responsibility of a permanent laboratory accredited by the Irish National Accreditation Board.
- Category D:** Site calibration and testing that is performed on site by individuals and organisations that do not have a permanent calibration/testing laboratory. Testing may be performed using
- (a) portable test equipment
 - (b) a site laboratory
 - (c) a mobile laboratory or
 - (d) equipment from a mobile or site laboratory

Standard Specification or Test Procedure Used:

The standard specification or test procedure that is accredited is the issue that is current on the date of the most recent visit, unless otherwise stated.

Glossary of Terms

Facilities:

- Public calibration/testing service:** Commercial operations which actively seek work from others.
- Conditionally available for public calibration/testing:** Established for another primary purpose but, more commonly than not, is available for outside work.
- Normally not available for public calibration/testing:** Unavailable for public calibration/testing more often than not.

Laboratory users wishing to obtain assurance that calibration or test results are reliable and carried out to the Irish National Accreditation Board criteria should insist on receiving an accredited calibration certificate or test report. Users should contact the laboratory directly to ensure that this scope of accreditation is current. INAB will, on request, verify the status and scope.

Scope of Accreditation



**Cork County Council
Chemical Testing Laboratory**

Permanent Laboratory:
Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766 Waters	Chemical analysis:	Documented in-house methods based on Standard Methods for the Examination of Water & Wastewater 21 st Edition APHA (See Note 1)
.01 Waters for domestic purposes Surface and ground waters	Biochemical Oxygen Demand 2 - 145,000 mg/l	CP No. 1 Membrane electrode
	pH 2 - 12	CP No. 5 Electrometry
	Suspended Solids 0.5 - 17,500 mg/l	CP No. 3 Gravimetric
	Chemical Oxygen Demand 21 - 135 mg/l 120 - 670,000 mg/l	CP No. 6 Reflux - colourmetric method
	Total phosphorus 0.2 - 5,300 mg/l	US-EPA Approved method/HACH Method CP No.20
	Ammonia 0.1 - 1,000 mg/l NH ₃ - N	Documented in-house method CP22 by Konelab based on Method for the Examination of Waters and Associated Material HMSO:1981

Scope of Accreditation



**Cork County Council
Chemical Testing Laboratory**

Permanent Laboratory:
Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766 Waters .01 Waters for domestic purposes <i>Surface and ground waters</i>	Orthophosphate as P (Konelab) Range: 0.005-1.00 mg O-PO4 P/L High Range: 1000 mg O-PO4 P/L Method Detection Limit: 0.02 mg O-PO4 P/L Chloride (Konelab) Range: 25-250 mg/L Cl- High Range Conc.: 86,000 mg/L Cl- Method Detection Limit: 25 mg/L Cl- Sulphate (Konelab) Range: 30-250 mg/L SO4/L High Range Conc.: 35,000 mg/L SO4/L Method Detection Limit: 30 mg SO4/L	CP No. 23 Ascorbic Acid Method CP No. 24 Ferricyanide Method CP No. 25 Documented in-house method by Konelab based on method for the examination of waters and waste waters and associated material HMSO: 1981

Scope of Accreditation



**Cork County Council
Chemical Testing Laboratory**

Permanent Laboratory:
Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766 Waters	Chemical analysis	Documented in-house methods based on Standard Methods for the Examination of Water & Wastewater 21 st Edition APHA (See Note 1)
.05 Trade Wastes <i>Industrial effluents</i> <i>Urban Wastewater</i> <i>Municipal Wastewater</i>	Biochemical Oxygen Demand 2 - 145,000 mg/l pH 2 - 12 Suspended Solids 0.5 - 17,500 mg/l Chemical Oxygen Demand 21 - 135 mg/l 120 - 670,000 mg/l Total phosphorus 0.2 - 5,300 mg/l Ammonia 0.1 - 1,000 mg/l NH ₃ -N	CP No. 1 Membrane electrode CP No. 5 Electrometry CP No. 3 Gravimetric CP No. 6 Reflux - colourmetric method US-EPA Approved method/HACH Method CP No.20 Documented in-house method CP22 by Konelab based on Method for the Examination of Waters and Associated Material HMSO: 1981.

Notes
1. APHA American Public Health Association, USA, 21st Edition

Scope of Accreditation



Cork County Council
Chemical Testing Laboratory

Permanent Laboratory:
 Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766 Waters	Chemical analysis	Documented in-house methods based on Standard Methods for the Examination of Water & Wastewater 21 st Edition APHA (See Note 1)
.05 Trade Wastes Industrial effluents Urban Wastewater Municipal Wastewater	Orthophosphate as P (Konelab) Range: 0.005 - 1.00 mg O-PO4 P/L High Range: 1000 mg O-PO4 P/L Method Detection Limit: 0.02 mg O-PO4 P/L	CP No. 1 Membrane electrode CP No. 23 Ascorbic Acid Method
	Chloride (Konelab) Range: 25-250 mg/L Cl- High Range Conc.: 86,600 mg /L Cl- Method Detection Limit: 25mg / L Cl-	CP No. 24 Ferricyanide Method
	Sulphate (Konelab)) Range: 30-250 mg/L SO4 /L High Range Conc.: 35,000 mg/L SO4 /L Method Detection Limit: 30 mg SO4 /L	CP No. 25 Documented in-house method by Konelab based on method for the examination of waters and waste waters and associated material HMSO: 1981

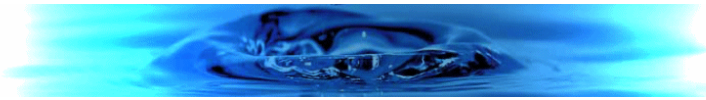
Notes
 1. APHA American Public Health Association, USA, 21st Edition

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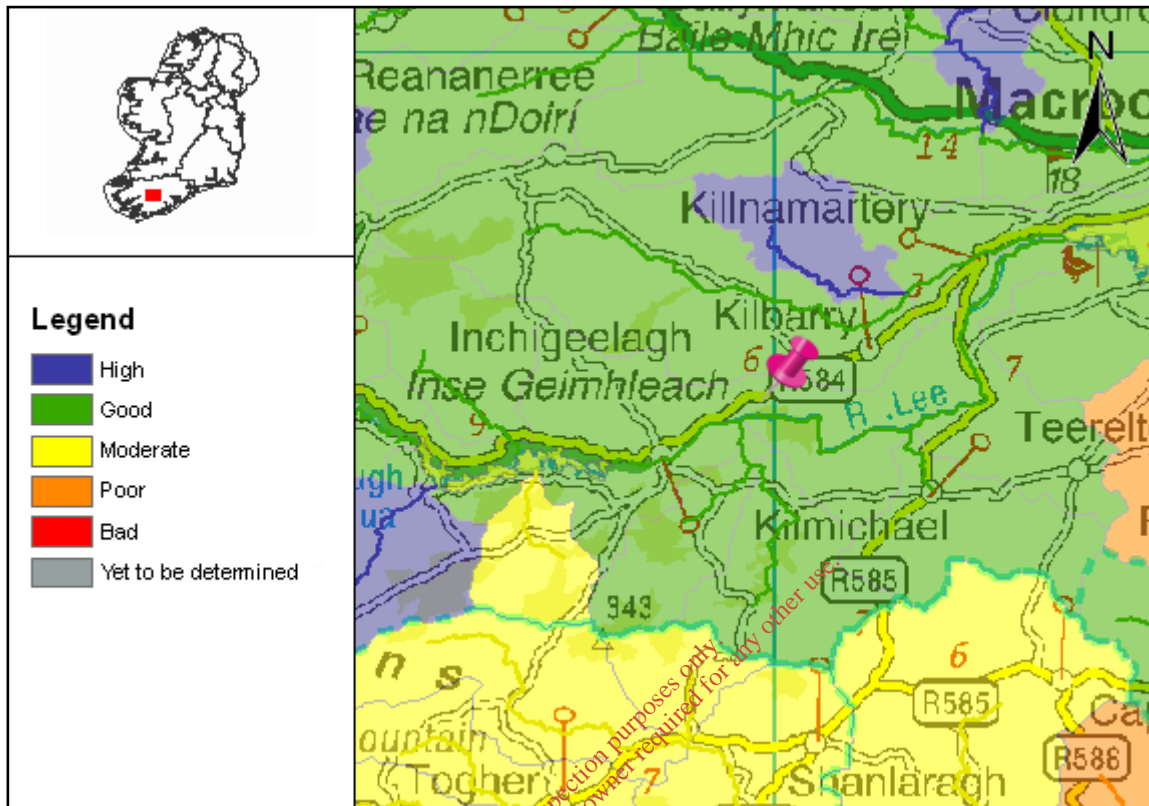
Attachment E4 Inchigeela Table E4

Sample Date	10/11/2009	10/11/2009
Sample	Inchigeela Outfall (SW1)	River Lee downstream Inchigeela (aSW-1d)
Sample Code	GT1360	GT1361
Flow M ³ /Day	*	*
pH	7.4	6.9
Temperature °C	*	*
Conductivity uS/cm 20 °C	479	63
Suspended Solids mg/L	161	3
Ammonia-N mg/L	28	<0.1
BOD mg/L	145	2
COD mg/L	300	<21
TN-N mg/L	38.43	0.79
Nitrite-N mg/L	<0.1	<0.1
Nitrate-N mg/L	<0.5	<0.5
TP-P mg/L	4.13	<0.05
O-PO4-P mg/L	3.47	<0.05
SO4 mg/L	<30	<30
Phenols µg/L	<0.10	*
Atrazine µg/L	<0.01	*
Dichloromethane µg/L	<1	*
Simazine µg/L	<0.01	*
Toluene µg/L	<0.28	*
Tributyltin µg/L	NOT REQUIRED	NOT REQUIRED
Xylenes µg/L	<0.73	*
Arsenic µg/L	<0.18	*
Chromium ug/L	<20	<20
Copper ug/L	107.9	<20
Cyanide µg/L	<5	*
Fluoride µg/L	7.7	40
Lead ug/L	<20	<20
Nickel ug/L	<20	<20
Zinc ug/L	270.6	<20
Boron ug/L	202.8	<20
Cadmium ug/L	<20	<20
Mercury µg/L	<0.03	*
Selenium µg/L	<2.12	*
Barium ug/L	41.7	<20

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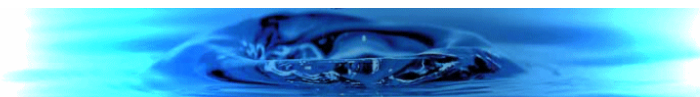


Full Report for Waterbody Lee, Trib of Lee



Date Reported to Europe: 22/12/2008

Date Report Created 16/11/2009



Summary Information:

WaterBody Category: Subbasin Waterbody

WaterBody Name: Lee, Trib of Lee

WaterBody Code: IE_SW_19_1901

Overall Status: Good

Overall Objective: Protect

Overall Risk: 2b Not At Risk

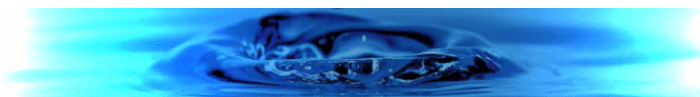
Applicable Supplementary Measures: Unsewered; Urban & Industrial; Morphology; Forestry;
Report data based upon Draft RBMP, 22/12/2008.



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Date Reported to Europe: 22/12/2008

Date Report Created 16/11/2009



Status Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: Lee, Trib of Lee

WaterBody Code: IE_SW_19_1901

Overall Status Result: **Good**

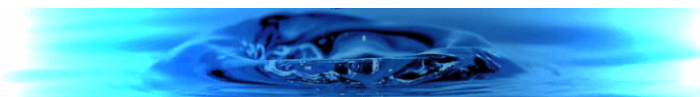


	Status Element Description	Result
EX	Status from Monitored or Extrapolated Waterbody	
	Biological Elements	
Q	Macroinvertebrates (Q-Value)	Good
F	Fish	n/a
DI	Phytobenthos (Diatoms)	n/a
FPM	Status value as determined by Margartifera	n/a
	Supporting Elements	
MOR	Hydromorphology	n/a
SP	Specific Pollutants	n/a
PC	General Physico-Chemical	Pass
	Chemical Status	
PAS	Chemical Status	n/a
	Overall Ecological Status	
O	Overall Ecological Status	Good

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Date Reported to Europe: 22/12/2008

Date Report Created 16/11/2009



Risk Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: Lee, Trib of Lee

WaterBody Code: IE_SW_19_1901

Overall Risk Result: **2b** Not At Risk

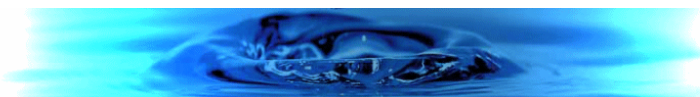


Risk Test Description	Risk
Point Risk Sources	
RP1 WWTPs (2008)	1a At Risk
RP2 CSOs	2b Not At Risk
RP3 IPPCs (2008)	2b Not At Risk
RP4 Section 4s (2008)	2b Not At Risk
RPO Overall Risk from Point Sources - Worst Case (2008)	1a At Risk
Diffuse Risk Sources	
RD1 EPA diffuse model (2008)	2b Not At Risk
RD2a Road Wash - Soluble Copper	2b Not At Risk
RD2b Road Wash - Total Zinc	2b Not At Risk
RD2c Road Wash - Total Hydrocarbons	2b Not At Risk
RD3 Railways	2b Not At Risk
RD4a Forestry - Acidification (2008)	2a Probably Not At Risk
RD4b Forestry - Suspended Solids (2008)	2b Not At Risk
RD4c Forestry - Eutrophication (2008)	2a Probably Not At Risk
RD5a Unsewered Areas - Pathogens (2008)	2a Probably Not At Risk
RD5b Unsewered Phosphorus (2008)	2b Not At Risk
RD5 Overall Unsewered (2008)	2b Not At Risk
RD6a Arable	2b Not At Risk
RD6b Sheep Dip	2b Not At Risk
RD6c Forestry - Dangerous Substances	2b Not At Risk
RDO Diffuse Overall -Worst Case (2008)	2a Probably Not At Risk

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Date Reported to Europe: 22/12/2008

Date Report Created 16/11/2009

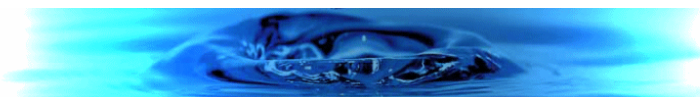


Morphological Risk Sources		
RM1	Channelisation (2008)	2b Not At Risk
RM2	Embankments (2008)	2b Not At Risk
RM3	Impoundments	2b Not At Risk
RM4	Water Regulation	2b Not At Risk
RM0	Morphology Overall - Worst Case (2008)	2b Not At Risk
Q/RDI or Point/Diffuse		
OPD	Q class/EPA Diffuse Model or worst case of Point and Diffuse (2008)	2b Not At Risk
Hydrology		
RHY1	Water balance - Abstraction	2b Not At Risk
Overall Risk		
RA	Rivers Overall - Worst Case (2008)	2b Not At Risk

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Date Reported to Europe: 22/12/2008

Date Report Created 16/11/2009



Objectives Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: Lee, Trib of Lee

WaterBody Code: IE_SW_19_1901

Overall Objective: **Protect**

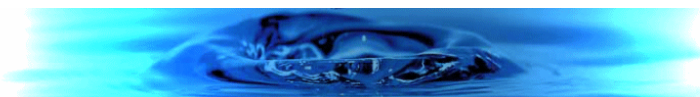


Objectives Description		Result
Objectives		
OB1	Objective 1 - Protected Areas	Protect
OB2	Objective 2 - Protect High and Good Status	Not Applicable
OB3	Objective 3 - Restore Less Than Good Status	Not Applicable
OB4	Objective 4 - Reduce Chemical Pollution	Not Applicable
OBO	Overall Objective	Protect
Deadline		
YR	Default Year by which the objective must be met	2015
EX	Revised Objective Deadline	2007
OBO	Overall Objective and Deadline	Protect

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Date Report Created 16/11/2009



Basic Measures Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: Lee, Trib of Lee

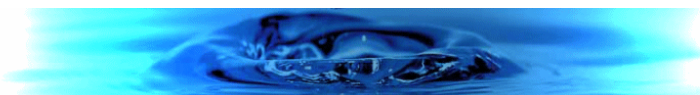
WaterBody Code: IE_SW_19_1901



	Basic Measures Description	Applicable
	Key Directives	
BA	Bathing Waters Directive	No
BI	Birds Directive	Yes
HA	Habitats Directive	Yes
DW	Drinking Waters Directive	Yes
SEV	Major Accidents and Emergencies (Seveso) Directive	Yes
EIA	Environmental Impact Assessment Directive	Yes
SE	Sewage Sludge Directive	Yes
UW	Urban Waste Water Treatment Directive	No
PL	Plant Protection Products Directive	Yes
NI	Nitrates Directive	Yes
IP	Integrated Pollution Prevention Control Directive	Yes
	Other Stipulated Measures	
CR	Cost recovery for water use	Yes
SU	Promotion of efficient and sustainable water use	Yes
DWS	Protection of drinking water sources	Yes
AB	Control of abstraction and impoundments	Yes
PT	Control of point source discharges	Yes
DI	Control of diffuse source discharges	Yes
GWD	Authorisation of discharges to groundwater	No
PS	Control of priority substances	Yes
MOR	Control of physical modifications to surface waters	Yes
OA	Controls on other activities impacting on water status	Yes
AP	Prevention or reduction of the impact of accidental pollution incidents	Yes

Date Reported to Europe: 22/12/2008

Date Report Created 16/11/2009



Urban and Industrial Discharges Supplementary Measures Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: Lee, Trib of Lee

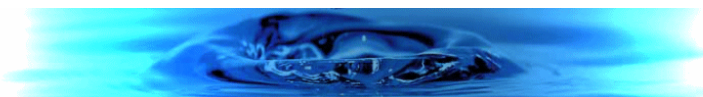
WaterBody Code: IE_SW_19_1901



	Point discharges to waters from municipal and industrial sources	Result
PINDDIS	Is there one or more industrial discharge (Section 4 licence issued by the local authority or IPPC licence issued by the EPA) contained within the water body?	Yes
PINDDISR	Are there industrial discharges (Section 4 licence issued by the local authority or IPPC licence issued by the EPA) that cause the receiving water to be 'At Risk' within the water body?	No
PB1	Basic Measure 1 - Measures for improved management.	Yes
PB2	Basic Measure 2 - Optimise the performance of the waste water treatment plant by the implementation of a performance management system.	No
PB3	Basic Measure 3 - Revise existing Section 4 license conditions and reduce allowable pollution load.	No
PB4	Basic Measure 4 - Review existing IPPC license conditions and reduce allowable pollution load.	No
PB5	Basic Measure 5 - Investigate contributions to the collection system from unlicensed discharges.	Yes
PB6	Basic Measure 6 - Investigate contributions to the collection system of specific substances known to impact ecological status.	Yes
PB7	Basic Measure 7 - Upgrade WWTP to increase capacity.	Yes
PB8	Basic Measure 8 - Upgrade WWTP to provide nutrient removal treatment.	No
PS1	Supplementary Measure 1 - Measures intended to reduce loading to the treatment plant.	No
PS2	Supplementary Measure 2 - Impose development controls where there is, or is likely to be in the future, insufficient capacity at treatment plants.	No
PS3	Supplementary Measure 3 - Initiate investigations into characteristics of treated wastewater for parameters not presently required to be monitored under the urban wastewater treatment directive.	No
PS4	Supplementary Measure 4 - Initiate research to verify risk assessment results and determine the impact of the discharge.	No
PS5	Supplementary Measure 5 - Use decision making tools in point source discharge management.	No
PS6	Supplementary Measure 6 - Install secondary treatment at plants where this level of treatment is not required under the urban wastewater treatment directive.	No
PS7	Supplementary Measure 7 - Apply a higher standard of treatment (stricter emission controls) where necessary.	No

Date Reported to Europe: 22/12/2008

Date Report Created 16/11/2009

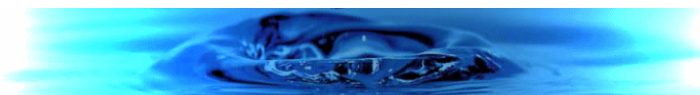


PS8	Supplementary Measure 8 - Upgrade the plant to remove specific substances known to impact on water quality status.	No
PS9	Supplementary Measure 9 - Install ultra-violet or similar type treatment.	No
PS10	Supplementary Measure 10 - Relocate the point of discharge.	No

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Date Reported to Europe: 22/12/2008

Date Report Created 16/11/2009



Physical Modifications Supplementary Measures Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: Lee, Trib of Lee

WaterBody Code: IE_SW_19_1901

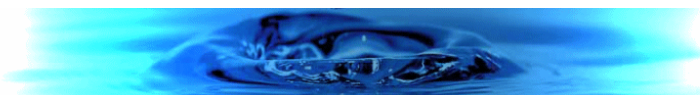


	Physical Modifications Supplementary Measures	Applicable
	Reduce	
SM1	Codes of Practice	Yes
SM2	Support for voluntary initiatives	Yes
	Remediate	
SM3	Channelisation impact remediation schemes	No
SM4	Channelisation investigation	No
SM5	Overgrazing remediation	No
SM6	Impassable barriers, impact confirmed, investigation into feasibility of remediation required	No
SM7	Impassable barriers investigation	Yes

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Date Report Created 16/11/2009



Unsewered Properties Supplementary Measures Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: Lee, Trib of Lee

WaterBody Code: IE_SW_19_1901

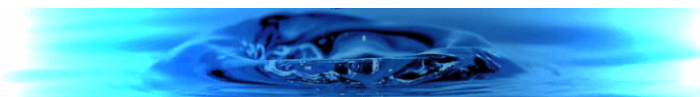


Supplementary Measures for Unsewered Properties		Applicable
SP1	Amend building regulations	Yes
SP2	Establish certified expert panels for site investigation and certification of installed systems	Yes
SP3	Assess applications for new unsewered systems by applying risk mapping/decision support systems and codes of practice	Yes
SP4	Carry out an inspection programme in prioritised locations for existing systems and record results in an action tracking system	No
SP5	Enforce requirements for percolation	No
SP6	Enforce requirements for de-sludging	Yes
SP7	Consider connection to municipal systems	No

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Date Reported to Europe: 22/12/2008

Date Report Created 16/11/2009



Forestry Measures Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: Lee, Trib of Lee

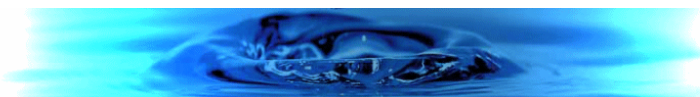
WaterBody Code: IE_SW_19_1901



	Forestry Measures for	Applicable
	Forestry	
SF1	Management Instruments - Ensure regulations and guidance are cross referenced and revised to incorporate proposed measures	No
SF2	Acidification - Avoid or limit afforestation on 1st and 2nd order stream catchments in acid sensitive areas	No
SF3	Acidification - Revise the Acidification Protocol to ensure actual minimum alkalinities are detected and revise boundary conditions for afforestation in acid sensitive areas	No
SF10	Pesticide Use - Pre-dip trees in nurseries prior to planting out	No
SF11	Pesticide Use - Maintain registers of pesticide use	No
SF12	Acidification - Restructure existing forests to include open space and structural diversity through age classes and species mix, including broadleaves	No
SF13	Acidification - Mitigate acid impacts symptomatically using basic material	No
SF14	Acidification - Manage catchment drainage to increase residence times and soil wetting	No
SF15	Acidification - Implement measures to increase stream production.	No
SF16	Eutrophication - Establish riparian zone management prior to clearfelling	No
SF17	Eutrophication and Sedimentation - Enhance sediment control	No
SF18	Eutrophication - Manage catchment drainage to increase residence times and soil wetting, including no drainage in some locations	No
SF19	Sedimentation - Establish riparian zone management prior to clearfelling	No
SF20	Sedimentation - Enhance sediment control	No
SF21	Sedimentation - Manage catchment drainage to increase residence times and soil wetting, including no drainage in some locations	No
SF22	Hydromorphology - Enhance drainage network management, minimise drainage in peat soils	No
SF23	Pesticide Use - Develop biological control methods	No

Date Reported to Europe: 22/12/2008

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SF4	Eutrophication and Sedimentation - Avoid or limit forest cover on peat sites	No
SF5	Eutrophication and Sedimentation - Change the tree species mix on replanting	No
SF6	Eutrophication and Sedimentation - Limiting felling coup size	No
SF7	Eutrophication and Sedimentation - Establish new forest structures on older plantation sites	No
SF8	Hydromorphology - Audit existing drainage networks in forest catchments	No
SF9	Pesticide Use - Reduce pesticide usage	No

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Date Reported to Europe: 22/12/2008

Date Report Created 16/11/2009

SITE SYNOPSIS

SITE NAME: THE GEARAGH

SITE CODE: 000108

This site is located on the River Lee in County Cork, extending westwards and southwards from the Lee Bridge, which is about 1.5km south of Macroom. It extends for about 7km of river, to Dromcarra Bridge. The Gearagh occupies a wide, flat valley of the River Lee, on a bed of limestone overlain with sand and gravel. The adjacent valley walls are of Old Red Sandstone.

This unusual area has formed where the River Lee breaks into a complex network of channels (2 to 6m wide) weaving through a series of wooded islands. The alluvial woodland which remains today at the Gearagh is of unique scientific interest, and qualifies as a priority habitat under Annex I of the European Habitats Directive. The area has probably been wooded throughout the Post-glacial era (i.e. since the end of the last Ice Age, which ended around 10,000 years ago) and frequent flooding has served to enhance its character. Originally, this area of alluvial woodland extended as far as the Lee Bridge. Unfortunately, in 1954/55, in the eastern part of the Gearagh, extensive tree-felling and flooding were carried out to facilitate the operation of a hydro-electric scheme. Around sixty per cent of the former woodland was lost. Today, the reservoir covers the area from Lee Bridge to Annahala Bridge and westwards of Illaunmore Island.

The islands in the Gearagh consist of rather dry alluvium, and support an almost closed canopy of Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*) and Birch (*Betula* spp.). The understorey is of Hazel (*Corylus avellana*), Holly (*Ilex aquifolium*) and Hawthorn (*Crataegus monogyna*). Willows (*Salix* spp.) and Alder (*Alnus glutinosa*) are largely confined to channel margins and waterlogged areas. The ground flora reflects the damp nature of the woodland. In spring, Ramsons (*Allium ursinum*) and Wood Anemone (*Anemone nemorosa*) are abundant. Later in the year, other species appear, including Bugle (*Ajuga reptans*), Pignut (*Conopodium majus*), Irish Spurge (*Euphorbia hyberna*), Tufted Hairgrass (*Deschampsia cespitosa*), Enchanter's Nightshade (*Circaea lutetiana*) and Meadowsweet (*Filipendula ulmaria*). Plants species of particular interest within the woodland are Wood Club-rush (*Scirpus sylvaticus*), Bird Cherry (*Prunus padus*) and Buckthorn (*Rhamnus catharticus*). These species are scarce in Ireland. The epiphytic bryophyte flora is well developed, as are some lichen communities. Variations in this vegetation occur locally, where drainage is impeded and where tree clearance has occurred. The whole area has a remarkably wild character, with many fallen trees blocking the channels, so that access both by foot and boat is difficult.

Within the reservoir, the former extent of the woodland can still be seen at times of low water: the cut stumps of larger trees remain prominently preserved in place. At least five species of Pondweed (*Potamogeton* spp.) occur in the reservoir, including two species which are uncommon in Ireland (*Potamogeton praelongus* and *P. gramineus*). At low water levels, a diverse ephemeral flora develops on the exposed mud. Species here include Water Purslane (*Lythrum portula*), Knotgrasses

(*Polygonum* spp.), Trifid Bur-marigold (*Bidens tripartita*), Marsh Yellow-cress (*Rorippa palustris*) and Six-stamened Waterwort (*Elatine hexandra*).

An oakwood occurs just north of Toon Bridge. Although wooded from ancient times, today the area supports relatively young oaks (*Quercus* sp.) on a southerly slope. Apart from oaks, Silver Birch (*Betula pendula*), Holly (*Ilex aquifolium*), Hazel (*Corylus avellana*), Ash (*Fraxinus excelsior*) and Rowan (*Sorbus aucuparia*) are also present. The ground flora is typical of that found in an oakwood, but is relatively species-rich, partly as a result of water seepage downslope. Species present include: Bilberry (*Vaccinium myrtillus*), Great Wood-rush (*Luzula sylvatica*), Hard Fern (*Blechnum spicant*), Buckler Fern (*Dryopteris aemula*), Woodruff (*Galium odoratum*), Wood Melic (*Melica uniflora*), Hairy Wood-rush (*Luzula pilosa*) and Early Purple Orchid (*Orchis mascula*).

Along the Gearagh, the river channels grade into marginal alluvial grassland in places. These grasslands, as well as some semi-improved grasslands within the site, are grazed by wildfowl. An area of cutaway bog and some Gorse (*Ulex* sp.) scrub also occur in the site. Extensive swards of Mudwort (*Limosella aquatica*), a Rare plant listed in the Red Data Book, occur on the mudflats along the reservoir. Otter, an Annex II species on the European Habitats Directive, is frequent throughout the site.

The Gearagh supports part of an important wintering bird population: the area most utilised by birds extends also east of the site, towards Cork city (Carrigadroighid). At the Gearagh, Whooper Swans are regular (40-110, 1990's), as are Wigeon (640, average max. 1992-1994), Teal (707, average max. 1992-94), Mallard (250 in January 1993) and Tufted Duck (154, average max. 1992-94). Golden Plover utilise the site on occasions (e.g. 2,000 in January 1994), while there is a regular flock of Dunlin (100-200, 1990s) a species unusual at inland sites. A late summering flock of Mute Swan is regular, with numbers between 120 and 250 from 1992 to 1994. Great Crested Grebe and Tufted Duck breed in small numbers, while there is a feral flock of about 50 Greylag Geese.

The wooded part of the Gearagh is largely undisturbed due to the inaccessible nature of the terrain. Cattle graze in some areas, but the impacts of this are very localised. In the past, coppicing was practiced over most of the area. Little felling has occurred since the early 1950's, and the installation of the hydro-electric scheme. The least disturbed part of woodland occurs in the upper reaches of the Gearagh. Tree regeneration is occurring around the reservoir, which may restore some of the lost portion of woodland.

Despite the fact that about half the original area has been destroyed the Gearagh still represents the only extensive alluvial woodland in Ireland or Britain, or indeed Western Europe west of the Rhine. For this reason it is a unique site and has been designated as a Statutory Nature Reserve. The international importance of the site is recognised by its designation both as a Ramsar site and as a Biogenetic Reserve. The reservoir is also a Wildfowl Sanctuary.

9.1.1997

SITE SYNOPSIS

SITE NAME: THE GEARAGH SPA

SITE CODE: 004109

The Gearagh, located c. 2 km south-west of Macroom, Co. Cork, comprises a stretch of the River Lee that was dammed in the 1950s as part of a hydroelectric scheme. The river valley formerly held an extensive area of alluvial forest but only part of the forest now survives. The SPA extends from Annahala bridge westwards to Toon bridge. The principal habitat is a shallow lake or reservoir which is fringed by wet woodland, scrub and grassland that is prone to flooding. Alluvial forest occurs on islands. At times of low water, a diverse pioneering plant community develops on the mud.

The alluvial forest is mostly confined to alluvium islands. It consists of an almost closed canopy of Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*) and Birch (*Betula* spp.). The understorey is of Hazel (*Corylus avellana*), Holly (*Ilex aquifolium*) and Hawthorn (*Crataegus monogyna*). Willows (*Salix* spp.) and Alder (*Alnus glutinosa*) are largely confined to channel margins and waterlogged areas. The ground flora reflects the damp nature of the woodland and includes such species as Ramsons (*Allium ursinum*), Wood Anemone (*Anemone nemorosa*), Bugle (*Ajuga reptans*), Pignut (*Conopodium majus*), Irish Spurge (*Euphorbia hyberna*) and Meadowsweet (*Filipendula ulmaria*). Scarce plant species recorded from within the woodland include Wood Club-rush (*Scirpus sylvaticus*), Bird Cherry (*Prunus padus*), Buckthorn (*Rhamnus catharticus*) and Rough Horsetail (*Equisetum hyemale*). The epiphytic bryophyte flora and lichen communities are well-developed.

The reservoir has a varied aquatic plant flora that included at least five species of Pondweed (*Potamogeton* spp.). At low water levels, an ephemeral flora develops on the exposed mud and such species as Water Purslane (*Lythrum portula*), Knotgrasses (*Polygonum* spp.) including the scarce Small Water-pepper (*P. mite*), Marsh Yellow-cress (*Rorippa palustris*) and Six-stamened Waterwort (*Elatine hexandra*) are found here. Extensive swards of Mudwort (*Limosella aquatica*), a plant listed in the Red Data Book, occur on the mudflats. The river channels grade into marginal alluvial grassland in places. These grasslands, as well as some semi-improved grasslands within the site, are grazed by wildfowl.

The Gearagh supports part of an important wintering bird population - the area most utilised by the birds also extends east of the site, towards Cork City (Carrigadrohid). Swans, dabbling duck, diving duck and some waders are present and the site provides both feeding and roost sites for the birds. Six of the species have populations of national importance (all figures are average peaks for the 5 winters 1995/96-1999/00): Mute Swan (192), Wigeon (1,080), Teal (1,194), Shoveler (36), Coot (308) and Golden Plover (1,918). Other species which occur regularly in substantial numbers include Whooper Swan (77), Gadwall (10), Mallard (584), Pochard (126), Tufted Duck (271), Lapwing (1,880) and Curlew (400). Other species which use the site include Goldeneye (23), Cormorant (26) and Grey Heron (12). A feral Greylag Goose

flock is present in the area. A few pairs each of Great Crested Grebe and Tufted Duck breed.

The Gearagh is a Nature Reserve, a Ramsar Convention site and a Council of Europe Biogenetic Reserve. There are no imminent threats to the wintering bird populations, though some disturbance is caused to the birds by illegal shooting.

The Gearagh SPA is a unique site due to the presence of remnants of one of the largest stands of alluvial woodland in Ireland or Britain. This habitat is listed, with priority status, on Annex I of the E.U. Habitats Directive. The reservoir created by the past damming activities now attracts important populations of wintering waterfowl, with six of the species having populations of national importance. Also of note is that two of the species which occur regularly, Whooper Swan and Golden Plover, are listed on Annex I of the E.U. Birds Directive.

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13.8.2004

Agglomeration details

Leading Local Authority	Cork County Council
Co-Applicants	
Agglomeration	Inchigeelagh
Population Equivalent	212
Level of Treatment	Primary
Treatment plant address	Cappanclare, Inchigeelagh, Cork.
Grid Ref (12 digits, 6E, 6N)	122571 / 065818 (Verified using GPS)
EPA Reference No:	

Contact details

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

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THIS APPLICATION HAS NOT BEEN SUBMITTED

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

Discharge Point Code: SW-1

Local Authority Ref No:	SW11GLA	
Source of Emission:	Primary Discharge	
Location:	Carrigeigh	
Grid Ref (12 digits, 6E, 6N)	122515 / 065900 (Verified using GPS)	
Name of Receiving waters:	River Lee	
Water Body:	River Water Body	
River Basin District	South Western RBD	
Designation of Receiving Waters:	pNHA	
Flow Rate in Receiving Waters:	0.03	m ³ .sec ⁻¹ Dry Weather Flow
	0.4518	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	35.78 m ³	Maximum/day	107.33 m ³
Maximum rate/hour	4.47 m ³	Period of emission (avg)	60 min/hr 24 hr/day 365 day/yr
Dry Weather Flow	0.00041 m ³ /sec		

THIS APPLICATION HAS NOT BEEN SUBMITTED

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

Discharge Point Code: SW-1

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
pH	pH	Grab	= 9	
Temperature	°C	Grab	= 25	
Electrical Conductivity (@ 25°C)	µS/cm	Grab	= 1000	
Suspended Solids	mg/l	Grab	= 350	37.57
Ammonia (as N)	mg/l	Grab	= 60	6.44
Biochemical Oxygen Demand	mg/l	Grab	= 300	32.2
Chemical Oxygen Demand	mg/l	Grab	= 800	85.86
Total Nitrogen (as N)	mg/l	Grab	= 85	9.12
Nitrite (as N)	mg/l	Grab	< 0.1	0.011
Nitrate (as N)	mg/l	Grab	< 0.5	0.054
Total Phosphorous (as P)	mg/l	Grab	= 12	1.29
OrthoPhosphate (as P)	mg/l	Grab	= 7	0.75
Sulphate (SO ₄)	mg/l	Grab	< 30	3.22
Phenols (Sum)	µg/l	Grab	< 0.1	0.011

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper

For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

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THIS APPLICATION HAS NOT BEEN SUBMITTED

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	< 0.01	0.0011
Dichloromethane	µg/l	Grab	< 1	0.11
Simazine	µg/l	Grab	< 0.01	0.0011
Toluene	µg/l	Grab	< 0.28	0.03
Tributyltin	µg/l	Grab	= 0	0
Xylenes	µg/l	Grab	< 0.73	0.078
Arsenic	µg/l	Grab	< 0.18	0.019
Chromium	µg/l	Grab	< 20	2.15
Copper	µg/l	Grab	= 200	21.47
Cyanide	µg/l	Grab	< 5	0.54
Flouride	µg/l	Grab	= 140	15.03
Lead	µg/l	Grab	< 20	2.15
Nickel	µg/l	Grab	< 20	2.15
Zinc	µg/l	Grab	= 500	53.67
Boron	µg/l	Grab	= 400	42.93
Cadmium	µg/l	Grab	< 20	2.15
Mercury	µg/l	Grab	< 0.03	0.0032
Selenium	µg/l	Grab	< 2.12	0.23
Barium	µg/l	Grab	= 80	8.59

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.

THIS APPLICATION HAS NOT BEEN SUBMITTED

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

Discharge Point Code: SW-2

Local Authority Ref No:	SW2IGLA	
Source of Emission:	Secondary Discharge	
Location:	Cappanclare	
Grid Ref (12 digits, 6E, 6N)	122587 / 065829 (Verified using GPS)	
Name of Receiving waters:	River Lee	
Water Body:	River Water Body	
River Basin District	South Western RBD	
Designation of Receiving Waters:	pNHA	
Flow Rate in Receiving Waters:	0.03	m ³ .sec ⁻¹ Dry Weather Flow
	0.08	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	11.93 m ³	Maximum/day	35.78 m ³
Maximum rate/hour	1.49 m ³	Period of emission (avg)	60 min/hr 24 hr/day 365 day/yr
Dry Weather Flow	0.00014 m ³ /sec		

THIS APPLICATION HAS NOT BEEN SUBMITTED

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	= 25	
Electrical Conductivity (@ 25°C)	µS/cm	Grab	= 1000	
Suspended Solids	mg/l	Grab	= 350	12.52
Ammonia (as N)	mg/l	Grab	= 0	0
Biochemical Oxygen Demand	mg/l	Grab	= 300	10.73
Chemical Oxygen Demand	mg/l	Grab	= 800	28.62
Total Nitrogen (as N)	mg/l	Grab	= 85	3.04
Nitrite (as N)	mg/l	Grab	= 0	0
Nitrate (as N)	mg/l	Grab	= 0	0
Total Phosphorous (as P)	mg/l	Grab	= 12	0.43
OrthoPhosphate (as P)	mg/l	Grab	= 0	0
Sulphate (SO ₄)	mg/l	Grab	= 0	0
Phenols (Sum)	µg/l	Grab	= 0	0

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper

For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

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Table D.1(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.

THIS APPLICATION HAS NOT BEEN SUBMITTED

Table D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS (Storm Overflow)

Discharge Point Code: SW-3

Local Authority Ref No:	SW3IGLA	
Source of Emission:	Storm Water Overflow	
Location:	Cappanclare	
Grid Ref (12 digits, 6E, 6N)	122571 / 065838 (Verified using GPS)	
Name of Receiving waters:	River Lee	
Water Body:	River Water Body	
River Basin District	South Western RBD	
Designation of Receiving Waters:	pNHA	
Flow Rate in Receiving Waters:	0.03	m ³ .sec ⁻¹ Dry Weather Flow
	0.08	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	m ³	Maximum/day	m ³
Maximum rate/hour	m ³	Period of emission (avg)	min/hr hr/day day/yr
Dry Weather Flow	m ³ /sec		

THIS APPLICATION HAS NOT BEEN SUBMITTED

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	13059.7
SW-2	365	4354.45

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THIS APPLICATION HAS NOT BEEN SUBMITTED

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
SW-3			No

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

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1d
Grid Ref (12 digits, 6E, 6N)	122601 / 065864 (Verified using GPS)

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	10/11/09					
pH		= 6.9			Grab	2	Electrochemical
Temperature	= 0				Grab	0.5	Electrochemical
Electrical Conductivity (@ 25°C)		= 63			Grab	0.5	Electrochemical
Suspended Solids		= 3			Grab	0.5	Gravimetric
Ammonia (as N)		< 0.1			Grab	0.02	Colorimetric
Biochemical Oxygen Demand		= 2			Grab	0.06	Electrochemical
Chemical Oxygen Demand		< 21			Grab	8	Digestion & Colorimetric
Dissolved Oxygen	= 0				Grab	0.2	ISE
Hardness (as CaCO ₃)	= 0				Grab	1	titrimetric
Total Nitrogen (as N)		= 0.79			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 default of 01/01/09 and 0 where no results are available
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THIS APPLICATION HAS NOT BEEN SUBMITTED

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)	122601 / 065864 (Verified using GPS)

Parameter	Results (µg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	10/11/09					
Atrazine	= 0				Grab	0.96	HPLC
Dichloromethane	= 0				Grab	1	GC-MS1
Simazine	= 0				Grab	0.01	HPLC
Toluene	= 0				Grab	0.02	GC-MS1
Tributyltin	= 0				Grab	0.02	GC-MS1
Xylenes	= 0				Grab	1	GC-MS1
Arsenic	= 0				Grab	0.96	ICP-MS
Chromium		< 20			Grab	20	ICP-OES
Copper		< 20			Grab	20	ICP-OES
Cyanide	= 0				Grab	5	Colorimetric
Flouride		= 40			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 no results are available, TBT testing not required
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THIS APPLICATION HAS NOT BEEN SUBMITTED

Annex 2: Check List For Regulation 16 Compliance

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

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

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

THIS APPLICATION HAS NOT BEEN SUBMITTED

Regulation 16(4) An original application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under Regulation 16(3) in hardcopy or in an electronic or other format as specified by the Agency.		Attachment Number	Checked by Applicant
1	An Original Application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under regulation 16(3) in hardcopy or in electronic or other format as specified by the agency.	Included	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.	Included	Yes
2	2 hardcopies of application provided or 2 CD versions of application (PDF files) provided.	Included	Yes
3	1 CD of geo-referenced digital files provided.	Included	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	Application Form	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,	Application Form	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,	Application Form	Yes
(d)	state the population equivalent of the agglomeration to which the application relates,	Application Form	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,	Application Form	Yes
(f)	specify the content and extent of the waste water discharge, the level of treatment provided and the flow and type of discharge,	Application Form	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,	Application Form	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,	Application Form	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,	Not Applicable	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,	Application Form	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,	Application Form	Yes
(l)	give details of any designation under any Council Directive or Regulations that apply in relation to the receiving waters,	Application Form	Yes
(m)	give details of compliance with any applicable monitoring requirements and treatment standards,	Application Form	Yes
(n)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work,	Application Form	Yes
(o)	give any other information as may be stipulated by the Agency, and	Application Form	Yes
(p)	be accompanied by such fee as is appropriate having regard to the provisions of Regulations 38 and 39.	See Cover Letter	Yes