

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>
V.3.	14/05/2012	<p>Amended Section B.6 and Section F.1 to take account of the requirements of European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) in terms of Appropriate Assessment under Article 6(3) of the Habitats Directive (92/43/EEC).</p> <p>Update references to new legislation</p>	<p>To accurately reflect the Habitats Regulations 2011 (S.I. No. 477 of 2011) requirements.</p> <p>To reflect changes in legislation</p>

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

CONTENTS

	Page
ABOUT THIS APPLICATION FORM	4
PROCEDURES	5
SECTION A: NON-TECHNICAL SUMMARY	7
SECTION B: GENERAL	12
SECTION C: INFRASTRUCTURE & OPERATION	20
SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT	24
SECTION E: MONITORING	29
SECTION F: EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)	32
SECTION G: PROGRAMMES OF IMPROVEMENTS	37
SECTION H: DECLARATION	40
SECTION I: JOINT DECLARATION	41

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, as amended 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, as amended. 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://epa.corasystems.com/EPA_WWD.

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, as amended. **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, as amended, 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, as amended.

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, as amended.

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.

*For inspection purposes only.
Consent of copyright owner required for any other use.*

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**

1. Introduction

Inchigeelagh is a village located in County Cork, approximately 15km southwest of Macroom. Presently the agglomeration is divided into three sub-catchments, two sub-catchments are located north of the River Lee (North catchment and North Eastern catchment) and one is to the south of the River Lee.

The North Catchment

This collection system is the largest of the existing networks and serves the older part of the village north of the River Lee. A pipeline starting at Marian Terrace runs westward along the R584 road before turning southward along the L3404 road. The network discharges untreated wastewater into the River Lee along the northern river bank, to the east of Inchigeelagh Bridge.

The North-Eastern Sub-Catchment

The North Eastern catchment collection system serves the newer Cois Na Coillte housing estate which consists of 19 detached and semi-detached houses. Cois Na Coillte has its own private package WWTP which discharges to a percolation area adjacent to the River Lee.

This package WWTP has not been properly maintained in recent times and as such is not providing adequate treatment. The HSE has directed Cork County Council to maintain the WWTP on health and safety grounds. The WWTP is currently de-sludged on a regular basis.

Southern Catchment

There are a small number of dwellings located south of the River Lee along the L3404. A single pipeline, located in the road, collects the wastewater from this area. The pipeline runs in a northerly direction before discharging the wastewater into the Inchigeelagh septic tank; located on the southern bank of the River Lee in a farmyard approximately 120 metres downstream of Inchigeelagh Bridge. Effluent from the septic tank is discharged to a soakaway adjacent to the River Lee.

The southern catchment will not be initially connected to the proposed Inchigeelagh Sewerage Scheme as it is already being served by a septic tank. 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. For further information please refer to the appropriate treatment assessment which is included in **Appendix F.1** of this application.

While the new pumping station will be sized to facilitate a future connection from the Southern Catchment and the WWTP site layout will also facilitate a future connection from the Southern Catchment, no works are proposed in the Southern Catchment at this time and the existing septic tank (SW004) will continue to operate.

Proposed Inchigeelagh Sewerage Scheme

Flows from the Northern and North-Eastern catchments are to be conveyed to a new wastewater treatment plant.

The project involves the construction of a new Wastewater Treatment Plant (WWTP) providing secondary treatment and a pumping station. The WWTP will be used to treat the wastewater before discharging it to the River Lee through a new outfall pipeline. A site has been identified for the scheme for a 30-year projected capacity, but the initial project objective is to provide infrastructure for the 10-year projected load (292 PE).

Once operational, the Inchigeelagh WWTP will eliminate the discharge of untreated wastewater to The River Lee, thereby having a significantly positive impact on water quality, aligning with objectives set out in the Water Framework Directive (2000/ 60/ EC) and the European Communities Environmental Objectives (Surface Water) Regulations, SI272 of 2009, as amended (Surface Water Regulations).

The planning application (No 20/05438) has been submitted to Cork County Council and has been granted conditional approval.

2. Proposed Wastewater Treatment Works

Inchigeelagh Sewerage Scheme Overview

The proposed Inchigeelagh Sewerage Scheme will provide a new wastewater treatment plant (WWTP), outfall, 1 no. proposed wastewater pumping stations, approximately 310m of new wastewater rising mains, 185m of new gravity sewers and associated and ancillary infrastructure.

Proposed Pumping Station (North Sub Catchment)

This PS will be located on the northern bank of the River Lee, just east of the bridge and will have a 20m³ emergency storage tank. From the PS the wastewater will be pumped (via rising main) eastward along the riverbank

via rising main to the WWTP which is to be located on a greenfield site just south of the Cois Na Coillte housing estate.

The existing outfall which discharges on the northern bank of The River Lee, identified as SW002 will be decommissioned and reused as the pumping stations' dual function emergency overflow/ SWO.

Cois Na Coillte (North East Sub Catchment)

The wastewater from Cois Na Coillte (NE catchment) will be intercepted prior to entering the existing private WWTP and rerouted via gravity sewer to the proposed WWTP.

Proposed Wastewater Treatment Plant

The current loading is estimated to be 274 PE. The WWTP will provide secondary treatment for a hydraulic and biological load up to a 10-year population equivalent (PE) of 292 before discharging the treated water into the River Lee via new outfall (SW001). Wastewater will be treated to the standards for secondary treatment set out in the Urban Wastewater Treatment Regulations.

The WWTP will consist of an inlet works, stormwater storage tank, primary settlement tanks, rotating biological contactors, secondary settlement tanks, sludge thickening and site control facilities.

Primary Discharge

The proposed primary discharge, identified as SW001, is treated effluent from the proposed WWTP which will discharge by gravity to The River Lee via a 50m long outfall (approx. 360m downstream of the existing primary discharge point which is to be re-purposed).

Secondary Discharge and Emergency Overflow

The existing outfall which discharges on the northern bank of The River Lee, previously identified as SW002 will be decommissioned and reused as the pumping stations' dual function emergency overflow/ SWO.

The private WWTP serving the Cois Na Coillte housing estate discharges to a percolation area adjacent to the River Lee (previously identified as GW001). Under the proposed scheme, effluent from Cois Na Coillte will be conveyed to the proposed WWTP for treatment, before being discharged via the proposed primary discharge SW001. The private Cois Na Coillte WWTP will then be decommissioned.

A septic tank serving Inchigeelagh national school is located within the site of the proposed pumping station on the northern bank of The River Lee. The septic tank discharges to water (previously identified as GW002) adjacent to the River Lee. The septic tank will be decommissioned as part of the proposed works with the flows currently entering the septic tank being rerouted to the pumping station.

The southern catchment is served by a septic tank located on the southern bank of the River Lee in a farmyard approximately 120 metres downstream of Inchigeelagh Bridge. Effluent from the septic tank is discharged directly to the River Lee (identified as SW004).

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 is to be retained as part of the proposed works. For further information, please refer to the appropriate treatment assessment which is included in **Attachment F.1** of this application.

There are no existing stormwater overflows or emergency overflows identified within the existing agglomeration.

The proposed upgrade works are being carried out under Irish Water's 2020-2024 Investment Plan (Revenue Cycle 3). The construction contract has been issued and work commenced (Q4 2021). It is anticipated that the construction works will be completed by Q4 2023. This programme is subject to statutory and budgetary approvals.

3. The source of emissions from the wastewater works

The sources of the emissions from the proposed WWTP are largely associated with the residential population of the agglomeration, as well as domestic type wastewater discharge from commercial sources (shops, offices etc.).

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

The proposed infrastructure has been designed to cater for the projected load at the 10-year design horizon (292 PE). MEICA (Mechanical, Electrical, Instrumentation Control and Automation) infrastructure will be provided to accommodate the 10-year projected load (292 PE). However, civil and structural components have been designed to cater for future expansion if required.

Secondary treatment of wastewater will be provided, with treatment effluent quality achieving 25mg/l cBOD limit and 35mg/l Suspended Solids limit.

No significant effects of emissions on the environment are anticipated on account of the available assimilative capacity of the receiving waters and the proposed effluent discharge standards. For further information on the assimilative capacity of the receiving waters, please refer to the appropriate treatment assessment and the Water Quality Assessment which is included in **Attachment F.1** of this application.

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

The proposed WWTP will be designed by the appointed Contractor to ensure the primary discharge of treated effluent achieves a 25mg/l limit in cBOD and a 35mg/l limit in Suspended Solids. The proposed WWTP will provide primary treatment (primary settlement tanks) and secondary treatment (rotating biological contactors) prior to discharging effluent to The River Lee via gravity outfall. This level of treatment is appropriate to ensure compliance with the Urban Waste Water Treatment Directive (91/271/EEC), the Water Framework Directive (2000/60/EC) and Surface Waters Regulations 2009 (SI No. 272 of 2009). A water quality assessment has been included in **Attachment F.1** of this application which demonstrates that the concentrations of Ammonia, BOD and Ortho-P in the receiving water downstream of the proposed primary discharge point (SW001) will be within the 'Good' status limits for both the current and 10-year population

equivalent as specified in the EC Environmental Objectives (Surface Water) Regulations, as amended.

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

Standard Operating Procedures, Environmental Plans and Site Emergency Plans will be developed by the Contractor prior to the WWTP becoming operational.

7. Measures planned to monitor emissions into the environment

The primary discharge monitoring will be carried out in accordance with the requirements of the Certificate of Authorisation. A sampling chamber will be provided for this purpose.

8. Reason for WWDA Review Application

The Agency issued a Certificate of Authorisation (Authorisation reference A0349-01). Irish Water now requests authorisation

- to relocate the primary outfall which is a different location to that authorised in the licence
- Retention of the Secondary discharge SW004
- Decommissioning of the Secondary discharge GW001 & GW002
- Authorisation of two dual function overflows

As well as serving the agglomerations current needs, the proposed development has been designed with the capability of being extended to cater for future growth and development within the agglomeration.

For inspection purposes only.
Consent of copyright owner required for any other use.

SECTION B: GENERAL

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

B.1 Agglomeration Details

Name of Agglomeration: [Inchigeelagh, Co Cork](#)

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*:	Irish Water
Address:	Colvill House
	24-26 Talbot Street
	Dublin 1
	D01 NP86
Tel:	01 892 5000
Fax:	
e-mail:	WasteWaterLicensingSouthern@water.ie

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

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

Name*:	Ken Conroy
Address:	Colvill House
	24-26 Talbot Street
	Dublin 1
	D01 NP86
Tel:	01 892 5000
Fax:	
e-mail:	WasteWaterLicensingSouthern@water.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*:	N/A
Address:	
Tel:	
Fax:	
e-mail:	

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

Attachment B.1 should contain appropriately scaled drawings / maps ($\leq A3$) 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
	X	

Please see agglomeration drawing **IW-10015227-03-02-001** located in **Attachment B.1**.

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*:	Regional Compliance Specialist
Address:	Carrigeigh
	Inchigeelagh
	Co Cork
Grid ref (6E, 6N)	E: 122780 N: 66006
Level of Treatment	Secondary treatment

*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
	X	

Please see drawing **IW-10015227-03-02-002** located in **Attachment B.2** for details of the proposed wastewater treatment plant.

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.

New Primary Discharge Point to be Constructed.

Discharge to	River Lee
Type of Discharge	Diffuser
Unique Point Code	SW001
Location	Carrleigh, Inchigeelagh, Co Cork, to the south east of Cois Na Coillte housing estate.
Grid ref (6E, 6N)	E 122842 N 65988

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
	X	

Please see drawing [IW-10015227-03-02-003](#) located in **Attachment B.3** for details of the primary discharge.

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.

Retained

Existing Septic Tank (Southern Bank)

Discharge to	River Lee (Southern Bank)
Type of Discharge	Septic tank discharging to River Lee
Unique Point Code	SW004
Location	The southern bank of the River Lee, immediately to the east of Inchigeelagh bridge.
Grid ref (6E, 6N)	E 122587 N 65829

Existing Private WWTP to be Decommissioned

Discharge to	Groundwater, adjacent to River Lee
Type of Discharge	Private treatment plant discharging to percolation area.
Unique Point Code	GW001
Location	The northern bank of the River Lee, to the south of Cois Na Coillte housing estate.
Grid ref (6E, 6N)	E 122828 N 66029

Existing Septic Tank to be Decommissioned (Northern Bank)

Discharge to	Groundwater, adjacent to River Lee (Northern Bank)
Type of Discharge	Septic tank discharging to groundwater, adjacent to River Lee
Unique Point Code	GW002
Location	The northern bank of the River Lee, immediately to the east of Inchigeelagh bridge.
Grid ref (6E, 6N)	E 122510 N 65914

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
	X	

Please see drawing **IW-10015227-03-02-004** located in **Attachment B.4** for details of the secondary discharges.

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.

Existing Primary Discharge Point to be Decommissioned and Reused as an Emergency Overflow/ SWO

Discharge to	River Lee
Type of	300mm concrete gravity sewer outfall pipe.

Discharge	
Unique Point Code	SW002
Location	The northern bank of the River Lee, immediately to the east of Inchigeelagh bridge.
Grid ref (6E, 6N)	E 122525 N 65881

Proposed WWTP SWO

Type of Discharge	Diffuser. (the WWTP outfall pipe will also act as a SWO)
Unique Point Code	SW003
Location	Carrigeigh, Inchigeelagh, Co Cork, to the south east of Cois Na Coillte housing estate.
Grid ref (6E, 6N)	E 122842 N 65988

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
	X	

Please see drawing **IW-10015227-03-02-005** located in **Attachment B.5** for details of the Stormwater Overflow location.

B.6 Planning Authority and/or Public Authority

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

Name:	Cork County Council
Address:	County Hall Carrigrohane Cork
Tel:	021 4276891
Fax:	
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	x	is being processed	
is not yet applied for		is not required	

Local Authority Planning File Reference No:	2005438
--	---------

Attachment B.6 should contain **the most recent** planning permission, including a copy of **all** conditions, a copy of the planning inspector's report 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.

Where applicable, provide a copy of any screening for Appropriate Assessment report and Natura Impact Statement (NIS) that was prepared for consideration by any planning/public authority as defined in Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) in relation to the waste water works which is the subject of this application. Where a determination that an Appropriate Assessment is required has been made by any planning/public authority in relation to the waste water works, a copy of that determination and any screening report and NIS, and any supplemental information furnished in relation to any such report or statement, which has been provided to the planning/public authority for the purposes of the Appropriate Assessment, shall be included in **Attachment B.6**.

The planning application (File No. 205438) has been submitted to Cork County Council and has been granted conditional approval. Confirmation of planning permission and the AA Screening Report has been included in **Attachment B.6**.

Attachment included	Yes	No
	x	

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
		x

B.7 (ii) Health Services Executive Region

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

Name:	Health Service Executive Southern Region
Address:	Model Business Park
	Model Farm Road
	Cork, T12 HT02
Tel:	021-4928703
Fax:	N/A

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	Total Agglomeration:327 (292 +53)
Data Compiled (Year)	Compiled in 2016
Method	Review of registered properties on GeoDirectory, 2016 Census results

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.

No significant developments identified where planning permission has been granted but development has not been completed.

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, as amended.

Class of waste water discharge	Fee (in €)
Review of Discharges from agglomerations with a population equivalent of less than 500	€2,000

Appropriate Fee Included	Yes	No
	x	

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.

The proposed upgrade works are being carried out under Irish Water’s 2020-2024 Investment Plan (Revenue Cycle 3). The construction contract has been issued and work commenced (Q4 2021). It is anticipated that the construction works will be completed by Q4 2023. This programme is subject to statutory and budgetary approvals.

While the new scheme will be sized to facilitate a future connection from the Southern Catchment no works are proposed in the Southern Catchment at this time and the existing Secondary Discharge (SW004) will continue as a Secondary Discharge at this time.

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
		x

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 to 2011.

There is a notice under Section 63 with regard to lack of appropriate treatment. The WWTP which is the subject of the application will remedy this issue.

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

Attachment included	Yes	No
		x

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.

A foreshore Licence is not required for the proposed Inchigeelagh Sewerage Scheme.

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
		x

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.

Proposed Wastewater Treatment Plant

The proposed WWTP will be designed to cater for hydraulic and biological loading up to a population equivalent (PE) of 292 (Phase 1 - 10-year design horizon) with the potential to upgrade to cater for a PE of 450 (Phase 2 - 30-year design horizon). The proposed WWTP will include the following infrastructure:

- Inlet flow attenuation chamber with overflow;
- Self-contained inlet micro strainer 6mm screen c/w integral hand raked bypass;
- Piped bypass manual raked bar screen 19mm;
- Overflow chamber (FA-FFT) c/w return pumps;
- Stormwater holding tank (76m³) c/w return pumps;
- Flow measurement flume (FFT);
- Flow split chamber;
- 2 no. primary settlement tanks (PST);
- PST de-sludge/ de-scum chamber to primary sludge pumping station;
- Supernatant liquors pumping station
- Collection manhole post PST;
- 2 no. rotating biological contactors;
- 2 no. humus tanks;
- Sample chamber c/w final effluent wash water pumps;
- Flow measurement chamber Potable/ final effluent wash water kiosk c/w break tank and poster pumps.
- Treated effluent outfall
- MCC and welfare kiosk.

A scheme layout plan sections are presented in drawings **IW-10015227-03-02-006 and IW-10015227-03-02-007** located in **Attachment C.1**.

The estimated Dry Weather Flow (DWF) for the 10-year design horizon is **66m³/day**;

The estimated Average Daily Flow (ADF) for the 10-year design horizons is **82.1m³/day**;

Effluent from the proposed WWTP is to achieve the following Design Standards.

- **cBOD (mg/l):** 25mg/l;
- **Suspended Solids (mg/l):** 35mg/l.

For further information on the assimilative capacity of the receiving waters, please refer to the appropriate treatment assessment which is included in **Attachment F.1** of this application.

Key process elements at the proposed WWTP are described below:

Inlet Works (Preliminary Treatment)

Preliminary treatment of flows up to Formula A will be provided by a single set of duty inlet screens. Inlet screens will incorporate a micro-strainer type screen with aperture at 6mm, contained in a prefabricated box complete with coarse bar bypass screen and screenings bin. Package inlet works will be in accordance with Irish Water Specification IW-TEC-700-99-02. The inlet works will incorporate a manual bypass which will be fitted with a 19mm manually raked bar screen. Screenings will be discharged into the skip/ wheelie bins prior to removal from site. Grit removal will also be provided.

Following preliminary treatment, flows will pass to a rectangular weir chamber which will enable Full Flow to Treatment (FFT) to pass forward for primary treatment, with flows in excess of FFT being diverted to the proposed stormwater storage tank.

Stormwater Management

The stormwater storage tank has been sized to store flows in excess of FFT and up to Formula A for the 10-year design horizon for up to 2 hours. The tank will incorporate return duty/ standby pumps, hydro ejector type mixer and screened overflow in the event flows exceed Formula A. Pumped flows are returned to the FA-FFT flow split chamber during periods of low flow at the inlet works.

The stormwater storage tank will be provided with a gravity overflow pipe which will discharge via the primary outfall.

Primary Settlement Tanks

The proposed Primary Settlement Tanks (PSTs) have been designed to cater for the 10-year design horizon but will also have adequate capacity to cater for the 30-year design flows. Screened flows up to FFT will be split upstream of the PSTs by means of a splitter chamber to create two equal process streams which will feed two independent primary settlement tanks. The PSTs will utilise the 'upward flow' type settlement process.

Rotating Biological Contactors

Secondary treatment of wastewater flows will be undertaken by passing FFT flows through Rotating Biological Contactor (RBC) units. The RBCs consist of a series of closely spaced circular discs of polypropylene copolymer (PP) construction. The cylindrical discs are attached to a horizontal shaft and provide the cross-sectional area required for effective biological treatment of the settled sewage inflow.

The RBC is partially submerged in a tank containing the wastewater and the discs rotate slowly at a rate of 1.0 revolution per minute. As the RBC discs rotate out of the water, aeration is achieved as the biofilm and wastewater is exposed to the atmosphere. Wastewater flows downward over the discs and solids sloughing occur. Biosolids in the treated effluent necessitate the requirement for final settlement downstream.

A single RBC unit will be sufficient to process 10-year FFT flows, however 2No. RBCs units will be provided to operate in parallel under the 30-year design conditions whilst providing operational redundancy. Each RBC incorporates internal flow management to ensure flows through the units are regulated.

Sludge Management

The sludge management system will receive sludges from the primary settlements tanks and will consist of a sludge pumping station, Picket Fence Thickener (PFT), and supernatant return pumping station.

Sludges from the PSTs will flow by gravity to the sludge pumping station, via which they will be pumped to the PFT. Supernatant will be taken from the PFT and recirculated to the flow split chamber prior to the PST via the supernatant return pump station.

Thickened solids will be collected via tanker and transported to the off-site collection facility.

The sludge management system is sized for the 10-year design horizon.

Proposed WWTP Outfall

The proposed WWTP outfall (SW001) will extend from the WWTP site to the centre of the River Lee (approx. 50m in length).

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.

A storm water overflow will be provided at the WWTP site SW003. The stormwater overflow will meet the criteria for storm water overflows, as set out in the DoEHLG 'Procedures and Criteria in Relation to Storm Water Overflows'

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.

The proposed Inchigeelagh Sewerage Scheme requires a new PS which is to be constructed on a greenfield site on the northern bank of the River Lee, east of the bridge (The Bridge PS). From the PS, the flows from the north catchment will be delivered to the WWTP via rising main which runs along the northern riverbank in a west to east direction.

The PS structure will be reinforced concrete and will contain a wet well with twin submersible pumps (in a duty – standby arrangement).

A concrete emergency/stormwater overflow storage tank (20m³ capacity) will also be provided. This allows for 6 hours (1DWF) of storage based on the 30-year design horizon in the event of power failure in accordance with Irish Water guidance (IW-TEC-800-02 Wastewater Pumping Stations and Rising Mains). Details of the PS emergency/stormwater overflow discharge (SW002) are provided on drawing **IW-10015227-03-02-007** in **Attachment C.1**.

In the event of a complete failure of the pumping station (i.e. power outage, pump failure etc), an alarm will be triggered which notifies the pumping station operator's of the failure. Emergency storage capacity will be provided to give Irish Water time to respond to the alarm. In such an event flows will overflow from the pump chamber to the emergency storage tank.

The stored flows will automatically return to the overflow/pump chamber, via the return pipe with non-return valve and will be pumped forward to the WWTP once normal operation of the pumping station is restored.

In the event of a sustained emergency event where the emergency storage tank is full, the emergency overflow will be activated, and screened flows will overflow to the River Lee.

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
	x	

Please see drawing **IW-10015227-03-02-006** located in **Attachment C.1** for details of the proposed wastewater treatment plant.

Please see drawing **IW-10015227-03-02-007** located in **Attachment C.1** for details of the pumping station.

Please see drawing **IW-10015227-03-02-008** located in **Attachment C.1** for the wastewater treatment plant piping and instrumentation diagram.



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.

The table below includes details of discharge volumes and frequencies along the proposed sewerage network. The grid references below are for the discharge locations.

Discharge Point Code	Discharge Point Type	Receiving Water Body Name	ING GPS Co-ords (Easting)	ING GPS Co-ords (Northing)	Frequency of Discharge (days/annum)	Nature/Composition	Rate of Discharge (m ³ /day @ Dry Weather Flow)
New to be Constructed							
SW001	Primary discharge	River Lee LEE(CORK)_030	122842	065988	365	Treated Effluent	66
Existing Primary to be Reused as SWO/Emergency Overflow							
SW002	PS emergency overflow/ SWO	River Lee LEE(CORK)_030	122525	065881	Unknown - intermittent	Screened	Unknown - intermittent
New Stormwater Overflow							
SW003	WWTP SWO	River Lee LEE(CORK)_030	122842	065988	Unknown - intermittent	screened	Unknown - intermittent
Existing Secondary to be Retained							
SW004	Septic Tank	River Lee LEE(CORK)_030	122507	65829	365	Treated Effluent	12
Existing to be Decommissioned							
GW001	Existing primary	Groundwater	122828	066029	0	-	0
GW002	Existing Secondary	Groundwater	122510	065914	0	-	0

Details of all discharges of waste water from the agglomeration should be submitted via the following web based link: http://epa.corasystems.com/EPA_WWD. 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.

The Agglomeration does not have a significant industrial load, the sources of the emissions from the proposed WWTP are largely associated with the residential population of the agglomeration, as well as domestic type wastewater discharge from commercial sources (shops, offices etc.).

Therefore, sources from the network or primary discharge are unlikely to result in pollutants listed in Annex VIII of the Water Framework Directive (2000/60/EC) to be present in concentrations that would impair the environment.

The proposed Inchigeelagh Sewerage Scheme will end the practice of the discharge of untreated wastewater to The River Lee and groundwater which will have a significant positive impact on the surface water quality.

The planned works will ensure that the emissions from the agglomeration will comply with and not result in the contravention of the Water Framework Directive.

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://epa.corasystems.com/EPA_WWD. 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.

The proposed primary discharge, identified as SW001, is treated effluent from the proposed WWTP which will discharge by gravity to The River Lee via a 50m long outfall (approx. 360m downstream of the existing primary discharge point).

The existing outfall which discharges on the northern bank of The River Lee, identified as SW002 will be decommissioned and reused as the pumping station dual function emergency overflow/ SWO.

A storm water overflow will be provided at the WWTP site, identified as SW003. Flows in excess of FFT (Flow to full treatment) will overflow to a 38m³ buffer tank. In the unlikely event that the buffer tank fills to capacity, excess flows will be screened and overflow via the WWTP outfall to the River Lee (approx. 360m downstream of the existing primary discharge point).

The southern catchment is served by a septic tank (SW004) located on the southern bank of the River Lee in a farmyard approximately 120 metres downstream of Inchigeelagh Bridge. Effluent from the septic tank is discharged directly to the River Lee (IE_SW_19L030200). Monitoring is carried out on the septic tank effluent on a bi-annual basis. The septic tank's 2018-2021 monitoring data is included in Attachment E.4.

Water quality in the River Lee is monitored by the EPA in a number of different stations. The nearest upstream station is at Inchinossig Bridge (Station number RS19L030100), which is located approximately 9km upstream of the discharge points. Water quality at this station had a Q4-5 value (High Ecological Condition) as of 2020 (the most recent data available).

The nearest downstream station is at the footbridge downstream of Inchigeelagh (Station number RS19L030200), which is located approximately 1.7km downstream of the Inchigeelagh Waste Water Treatment System discharge point. Water quality at this station had a Q4 value (Good Ecological Condition) as of the 2020 data.

The River Lee (IE_SW_19L030200) has a WFD risk status of 'not at risk'.

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
		x

*For inspection purposes only.
Consent of copyright owner required for any other use.*

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://epa.corasystems.com/EPA_WWD. 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.

A privately owned treatment plant currently serves the Cois Na Coillte housing estate and discharges to groundwater adjacent to the River Lee (discharge GW001). The contractor responsible for the maintenance of the treatment plant has been liquidated and the treatment plant is currently being maintained by Cork County Council on the direction of the HSE.

The flows entering this treatment plant will be rerouted to the proposed treatment plant as part of the proposed works and will be discharged via the proposed primary discharge (SW001).

The national school to the north east of Inchigeelagh Bridge is served by a septic tank (GW002) on the northern bank of the River Lee, immediately downstream of Inchigeelagh Bridge. The septic tank currently discharged to groundwater adjacent to the river. The septic tank will be demolished as part of the proposed works and the flows which currently enter the septic tank will be rerouted to the proposed WWTP for treatment via the Bridge Pumping Station.

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
		x

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.

A privately owned treatment plant currently serves the Cois Na Coillte housing estate and discharges to groundwater adjacent to the River Lee (discharge GW001). The contractor responsible for the maintenance of the treatment plant has been liquidated and the treatment plant is currently being maintained by Cork County Council on the direction of the HSE.

The flows entering this treatment plant will be rerouted to the proposed treatment plant as part of the proposed works and will be discharged via the proposed primary discharge (SW001). The private WWTP will then be decommissioned.

D.2 Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

Table D.2:

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING
Point Code Provide label ID's	Point Type (e.g., Primary/ Secondary/ Storm Water Overflow)	Local Authority Name (e.g., Donegal County Council)	Receiving Water Body Type	Receiving Water Body Name (e.g., River Suir)	Protected Area Type (e.g., SAC, candidate SAC, NHA, SPA etc.)	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference
SW001	Primary	Cork County Council	River	River Lee LEE (CORK)_030	Nearest SAC is SAC 000108 which is a fluvial distance of 9km downstream. Nearest SPA is SPA 004190 which is a fluvial distance of 10km downstream	122842	065988
SW002	Emergency Overflow	Cork County Council	River	River Lee LEE (CORK)_030	Nearest SAC is SAC 000108 which is a fluvial distance of 9km downstream. Nearest SPA is SPA 004190 which is a fluvial distance of 10km downstream	122525	065881
SW003	Storm Water Overflow	Cork County Council	River	River Lee LEE (CORK)_030	Nearest SAC is SAC 000108 which is a fluvial distance of 9km downstream. Nearest SPA is SPA 004190 which is a fluvial distance of 10km downstream	122842	065988
SW004	Secondary	Cork County Council	River	River Lee LEE (CORK)_030	Nearest SAC is SAC 000108 which is a fluvial distance of 9km downstream. Nearest SPA is SPA 004190 which is a fluvial distance of 10km downstream	122587	065829

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

SECTION E: MONITORING

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

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

Provide an estimation of the quantity of waste water likely to be emitted in relation to all primary and secondary discharge points applied for. This information should be included in Table 'Discharge Point Details' via the following web based link: http://epa.corasystems.com/EPA_WWD.

Discharge Point Code	Discharge Point Type	Receiving Water Body Name	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Frequency of Discharge (days/annum)	Rate of Discharge (m ³ /day @ Average Daily Flow)
New to be Constructed						
SW001	Primary discharge	River Lee LEE (CORK)_030	122842	065988	365	Phase 1 – 82.1
Existing Primary to be Reused as Emergency Overflow/ SWO						
SW002	Emergency Overflow/ SWO	River Lee LEE (CORK)_030	122585	065881	Unknown - intermittent	Unknown - intermittent
New Stormwater Overflow						
SW003	Emergency Overflow/ SWO	River Lee LEE (CORK)_030	122842	065988	Unknown - intermittent	Unknown - intermittent
Existing Secondary to be Retained						
SW004	Septic Tank	River Lee LEE (CORK)_030	122587	65829	365	12

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://epa.corasystems.com/EPA_WWD.

Flows in excess of FFT (Flow to full treatment) will overflow to a 38m³ buffer tank. In the unlikely event that the buffer tank fills to capacity, excess flows will overflow to the River Lee via the WWTP outfall (SW003).

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.

Bi-annual effluent monitoring will be provided at the primary discharge (SW001).

Bi-annual effluent monitoring is provided on the existing septic tank (SW004).

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.

Water quality in the River Lee is monitored by the EPA in a number of different stations. The nearest upstream station is at Inchinossig Bridge (Station number RS19L030100), which is located approximately 9km up-stream of the discharge points. Water quality at this station had a Q4-5 value as of 2020.

The nearest downstream station is at the Footbridge downstream of Inchigeelagh (Station number RS19L030200), which is located approximately 1.7km downstream of the Inchigeelagh Waste Water Treatment System discharge point. Water quality at this station had a Q4 value as of 2020.

The River Lee (IE_SW_19L030200) has a WFD risk status of 'not at risk'. A waste assimilative capacity assessment has been included in **Attachment F.1** of this application which demonstrates that the concentrations of Ammonia, BOD and Ortho-P in the receiving water downstream of the proposed primary discharge point (SW001) will be within the 'good' status limits for both the current and 10-year population equivalent as specified in the EC Environmental Objectives (Surface Water) Regulations, as amended.

Please see drawing **IW-10015227-03-02-002** in **Attachment B.2** for details of the monitoring point locations within the WWT.

Reference should be made to, provision of sampling points and safe means of access, sampling methods, analytical and quality control procedures, including equipment calibration, equipment maintenance and data recording/reporting procedures to be carried out in order to ensure accurate and reliable monitoring.

In determining the sampling programme to be carried out, the variability of the discharge and its effect on the receiving environment should be considered.

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

Attachment included	Yes	No
	x	

E.3. Tabular data on Monitoring and Sampling Points

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

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
Point Code Provide label ID's assigned in section E of application	Point Type (e.g., Primary, Secondary, Storm Water Overflow)	Monitoring Type M = Monitoring S = Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used
SW001	Primary	Sampling	122798	066002	Y
SW001	Primary	Monitoring	122798	066002	Y
SW003	SWO	Monitoring	122776	066005	Y
SW004	Septic Tank	Monitoring	122587	065829	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, as amended, 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.

Sampling Data associated with the septic tank (SW004) effluent from the years 2018-2021 is included in Attachment E.4.

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

A monitoring and sampling programme will be undertaken on completion of the new WWTP in accordance with the relevant standards and frequencies as set out by Irish Water and to comply with the Waste Water Discharge Certificate of Authorisation.

Attachment E.4 should contain any supporting information.

Attachment included	Yes	No
	X	

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://epa.corasystems.com/EPA_WWD 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.

The proposed primary discharge (SW001), dual function Stormwater/emergency overflow from the pumping station (SW002), stormwater overflow (SW003) and septic tank (SW004) all discharge to The River Lee.

The following 2no Natura 2000 sites are within 15km of the proposed development and are linked hydraulically to the proposed development site;

The Gearagh Special Area of Conservation (SAC 000108), located approximately 7km to the east of the proposed development and at a fluvial distance of approximately 9km. The Qualifying interests of this SAC are:

- Old sessile oak woods with Ilex and Blechnum in British Isles [Code 91A0]
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [Code 91E0]
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche/Batrachion* vegetation [Code 3260]
- Otter (*Lutra lutra*) [Code 1355]

The Gearagh Special Protection Area (SPA 004190), located approximately 8.5km to the northeast of the proposed development and at a fluvial distance of approximately 10km. The features of interest of this SPA are:

- Teal (*Anas crecca*) [A052]
- Wigeon (*Anas penelope*) [A050]
- Mallard (*Anas platyrhynchos*) [A053]
- Coot (*Fulica atra*) [A125]
- Wetlands [A999]

There are no designated bathing areas relevant to the development site.

There are two designated Nutrient Sensitive Areas (NSAs) (Lee Estuary/Lough Mahon, Owennacurra Estuary/North Channel) associated with two waste water treatment plants (Cork City and Midleton) which discharge downstream of Cork City. Both areas are sufficiently downstream of the proposed development site so that they will not be significantly affected.

- Details of monitoring of the receiving ground water should be supplied via the following web based link: http://epa.corasystems.com/EPA_WWD. 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.

No discharges to groundwater are proposed.

- 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.

The secondary discharge (septic tank SW004) is monitored on a bi-annual basis. Monitoring data from 2018 – 2021 is included in Attachment E4.

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

The River Lee (Water Body Code IE_SW_19L030200, EPA River Code 19L03) rises approximately 6km west of Ballygeary village, in the mountainous terrain at Gougane Barra Lake. The River flows in an easterly direction through Ballygeary 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" under the Water Framework Directive.

The EU Water Framework Directive (WFD) (2000/60/EC) requires all Member States to protect and improve water quality in all waters so that they achieve "good" ecological status by 2015 or, at the latest, by 2027. It was given legal effect in Ireland by the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003). It applies to rivers, lakes, groundwater, and transitional coastal waters. The Directive requires that management plans be prepared and specifies a structured method for developing these plans.

The EPA monitors water quality of rivers in Ireland in order to assist with providing guidance towards the protection and enhancement of aquatic resources. A summary of the findings of the EPA's monitoring of rivers is provided on the EPA's Geoportal website. The nearest upstream station is at Inchinossig Bridge (Station number RS19L030100), which is located approximately 9km up-stream of the discharge points. Water quality at this station had a Q4-5 value as of 2020 (the most recent data available).

The nearest downstream station is at the footbridge downstream of Inchigeelagh (Station number RS19L030200), which is located approximately 1.7km downstream of the Inchigeelagh Wastewater Treatment System discharge point. Water quality at this station had a Q4 value (Good Ecological Condition) as of the 2020 data.

The Waste Assimilate calculations (**Attachment F.1**) demonstrates that the proposed discharge from the new WWTP will not impact the river Lee from maintaining its good status. In fact, the predicted downstream concentrations from the new WWTP would not breach the EQS for high Status. The EQS relates to the Oxygenation and Nutrient Conditions set out in the Surface Water Regulations 2009. As amended.

- 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.

As the source of the wastewater in Inchigeelagh is municipal in nature, it is not considered likely that concentrations of dangerous substances from the agglomeration will impair the environment.

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

The raw water abstraction for Inniscarra WTP is approximately 42km downstream of the proposed discharge point from the Inchigeelagh WWTP. The Lee Road WTP is a further 13km downstream. The catchment between Inchigeelagh and the WTPs is largely agricultural. Both WTPs utilise clarifiers, rapid gravity filters and chlorination as part of the water treatment process.

The proposed WWTP at Inchigeelagh will not result in an increase in the numbers of faecal coliform, salmonella and protozoan pathogen in the receiving water environment as the existing discharge of untreated sewage will be replaced by a discharge of treated effluent.

Once operational, the Inchigeelagh WWTP will eliminate the discharge of untreated wastewater to The River Lee, thereby having a significantly positive impact on water quality, aligning with objectives set out in the Water Framework Directive (2000/ 60/ EC) and the European Communities Environmental Objectives (Surface Water) Regulations, SI272 of 2009, as amended (Surface Water Regulations).

- o 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 European Site, as defined in Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations (S.I. No. 477 of 2011). Undertake a screening for Appropriate Assessment and state whether the discharge(s), individually or in combination with other plans or projects, is likely to have a significant effect on a European Site(s), in view of best scientific knowledge and the conservation objectives of the site(s). Where it cannot be excluded, on the basis of objective scientific information, following screening for Appropriate Assessment, that the discharge(s), either individually or in combination with other plans or projects, will have a significant effect on a European Site, the applicant shall provide a Natura Impact Statement. Where based on screening it is considered that an Appropriate Assessment is not required, a reasoned response should be provided. 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**.

An AA screening report has been produced for the proposed wastewater treatment scheme which concluded that "Having assessed all relevant potential effects of the proposed development, it is considered that all potential impacts on the Conservation Objectives and integrity of Natura 2000 sites can be screened out."

The AA Screening Report has been included in **Attachment B.6**.

Refer to **Attachment F.1**; Inchigeelagh Appropriate Treatment Assessment

Attachment included	Yes	No
	X	

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.

There are two water abstraction points down stream of the proposed development site, details of these two abstraction points are given in the table below. The WWTP is unlikely to give rise to significant effects on the River Lee upstream of the water abstraction points.

The quality of the treated effluent, coupled with the long distances (38K & 51K) between the primary discharge and the abstraction point indicates that the abstraction points are adequately protected.

ABS_CD	AGG_SERVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
Abstraction Code	Agglomeration served	Abstraction Volume in m ³ /day	Point Code Provide label ID's	Distance Downstream in meters from Emission Point to Abstraction Point	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used
SW_Lee28 8Main_Lee _Lower,LW B:Inniscarr aReservoir	Cork Harbour and City Public Water Supply	120,000m ³ (design capacity)	N/A	38,000m	153489	072309	Y
SW_Lee28 8Main_Le 1Lower	Cork City	49,00	N/A	51,000m	164738	071444	Y

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.

For inspection purposes only. Consent of copyright owner required for any other use.

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).

The proposed Inchigeelagh Sewerage Scheme will end the practice of the discharge of untreated wastewater to The River Lee and groundwater which will have a significant positive impact on the surface water quality.

The planned works will ensure that the emissions from the agglomeration will comply with and not result in the contravention of the above Directives. Further details on the proposed WWTP are detailed in **Section B.2** of this application.

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
		X

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.

Once operational, the Inchigeelagh WWTP will eliminate the discharge of untreated wastewater to The River Lee, thereby having a significantly positive impact on water quality, aligning with objectives set out in the Water Framework Directive (2000/ 60/ EC) and the European Communities Environmental Objectives (Surface Water) Regulations, SI272 of 2009, as amended (Surface Water Regulations).

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

Attachment included	Yes	No
		X

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.

The proposed Inchigeelagh Sewerage Scheme will end the practice of the discharge of untreated wastewater to The River Lee and groundwater. There are no additional investments planned beyond the current work programme.

The proposed upgrade works are being carried out under Irish Water's 2020-2024 Investment Plan (Revenue Cycle 3). The construction contract has been issued and works commenced (Q4 2021). It is anticipated that the construction works will be completed by Q4 2023. This programme is subject to statutory and budgetary approvals.

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
		X

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, as amended.

At the WWTP site, flows in excess of FFT (Flow to full treatment) will overflow to a 38m³ buffer tank. In the unlikely event that the buffer tank fills to capacity, excess flows will be screened and discharged to the WWTP outfall (SW003).

This is in accordance with the definition of 'storm water overflow' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007, as amended as defined below.

"storm water overflow" means a structure or device on a sewerage system designed and constructed for the purpose of relieving the system of excess flows that arise as a result of rain water or melting snow in the sewered catchment, the excess flow being discharged to receiving waters;

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
		X

For inspection purposes only.
Consent of copyright owner required for any other use.

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, as amended.

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 or any person acting on the Applicant's behalf.



Signed by : _____

Date : _____
(on behalf of the organisation)

Print signature name: Sean Laffey _____

Position in organisation: _____ Asset Management & Sustainability
Director

For inspection purposes only.
Consent of copyright owner required for any other use.

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, as amended.

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 or any person acting on the Applicant's behalf.

Lead Authority



Signed by : _____ **Date :** 10/12/2021
(on behalf of the organisation)

Print signature name: Sean Laffey

Position in organisation: Asset Management & Sustainability Director

Co-Applicants

Signed by : NA **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.