

## Courtbrack WWTP – Discharge Certificate Application

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Agglomeration details

Leading Local Authority	Cork County Council
Co-Applicants	
Agglomeration	Courtbrack
Population Equivalent	250
Level of Treatment	Tertiary
Treatment plant address	Courtbrack, Co. Cork
Grid Ref (12 digits, 6E, 6N)	155516 / 079475
EPA Reference No:	

Contact details

Contact Name:	Patricia Power
Contact Address:	Areas operations South Cork County Council County Hall Carrigohane Rd Cork
Contact Number:	021-4276891
Contact Fax:	021-4276321
Contact Email:	patricia.power@corkcoco.ie

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

Discharge Point Code: SW-1

Local Authority Ref No:	
Source of Emission:	Proposed WWTP
Location:	Fox's Bridge, Courtbrack, Co. Cork
Grid Ref (12 digits, 6E, 6N)	155445 / 079123
Name of Receiving waters:	Shournagh River
Water Body:	River Water Body
River Basin District	South Western RBD
Designation of Receiving Waters:	None
Flow Rate in Receiving Waters:	0 m <sup>3</sup> .sec <sup>-1</sup> Dry Weather Flow 0.162 m <sup>3</sup> .sec <sup>-1</sup> 95% Weather Flow
Additional Comments (e.g. commentary on zero flow or other information deemed of value)	No info

Emission Details:

(i) Volume emitted			
Normal/day	45 m <sup>3</sup>	Maximum/day	45 m <sup>3</sup>
Maximum rate/hour	10.8 m <sup>3</sup>	Period of emission (avg)	60 min/hr 24 hr/day 365 day/yr
Dry Weather Flow	0.0005 m <sup>3</sup> /sec		

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

Discharge Point Code: SW-1

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
pH	pH	Grab	= 0	
Temperature	°C	Grab	= 0	
Electrical Conductivity (@ 25°C)	µS/cm	Grab	= 0	
Suspended Solids	mg/l	Grab	= 0	0
Ammonia (as N)	mg/l	Grab	= 0	0
Biochemical Oxygen Demand	mg/l	Grab	= 0	0
Chemical Oxygen Demand	mg/l	Grab	= 0	0
Total Nitrogen (as N)	mg/l	Grab	= 0	0
Nitrite (as N)	mg/l	Grab	= 0	0
Nitrate (as N)	mg/l	Grab	= 0	0
Total Phosphorous (as P)	mg/l	Grab	= 0	0
OrthoPhosphate (as P)	mg/l	Grab	= 0	0
Sulphate (SO <sub>4</sub> )	mg/l	Grab	= 0	0
Phenols (Sum)	µg/l	Grab	= 0	0

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

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

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

Discharge Point Code: SW-1

Substance	As discharged			
	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 6246, or equivalent.

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

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m <sup>3</sup> /annum)
SW-1	365	16425

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

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

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1u
Grid Ref (12 digits, 6E, 6N)	155445 / 079123

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	08/09/08	13/10/08	09/12/08	13/10/10			
pH	= 6.99	= 8.05	= 7.37		Grab		
Temperature	= 12.5	= 13	= 7		Grab		
Electrical Conductivity (@ 25°C)	= 182.4	= 198.2	= 117.1		Grab		
Suspended Solids	< 5	< 5	< 5		Grab		
Ammonia (as N)	= 0.016	= 0.16	= 0.0195		Grab		
Biochemical Oxygen Demand	< 4	< 4	= 4		Grab		
Chemical Oxygen Demand	= 15	= 15	= 15		Grab		
Dissolved Oxygen	= 8.84	= 4.28	= 6.24		Grab		
Hardness (as CaCO <sub>3</sub> )			= 0		Grab		
Total Nitrogen (as N)	= 0.05		= 0.05	= 0.05	Grab		
Nitrite (as N)	< 0.01	= 0.01	= 0.01		Grab		
Nitrate (as N)			= 0		Grab		
Total Phosphorous (as P)	= 0.04	= 0.05	= 0.03		Grab		
OrthoPhosphate (as P)	= 0.03		= 0.01		Grab		
Sulphate (SO <sub>4</sub> )			= 0		Grab		
Phenols (Sum)			= 0		Grab		

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

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1u
Grid Ref (12 digits, 6E, 6N)	155445 / 079123

Parameter	Results (µg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	09/12/08						
Atrazine	= 0						
Dichloromethane	= 0						
Simazine	= 0						
Toluene	= 0						
Tributyltin	= 0						
Xylenes	= 0						
Arsenic	= 0						
Chromium	= 0						
Copper	= 0						
Cyanide	= 0						
Flouride	= 0						
Lead	= 0						
Nickel	= 0						
Zinc	= 0						
Boron	= 0						
Cadmium	= 0						
Mercury	= 0						
Selenium	= 0						
Barium	= 0						

Additional Comments:	
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**Annex 2: Check List For Regulation 16 Compliance**

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

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

<b>Regulation 16(1)</b> <b>In the case of an application for a waste water discharge licence, the application shall -</b>		<b>Attachment Number</b>	<b>Checked by Applicant</b>
(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,	Not Applicable	Yes
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,	Not Applicable	Yes
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the waste water treatment plant and/or the waste water discharge point or points to which the application relates,	Not Applicable	Yes
(d)	state the population equivalent of the agglomeration to which the application relates,	Not Applicable	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,	Not Applicable	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.	Not Applicable	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,	Not Applicable	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,	Not Applicable	Yes
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,	Not Applicable	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,	Not Applicable	Yes
(l)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,	Not Applicable	Yes
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.	Not Applicable	Yes
(n)	Any other information as may be stipulated by the Agency.	Not Applicable	Yes
<b>Regulation 16(3)</b> <b>Without prejudice to Regulation 16 (1) and (2), an application for a licence shall be accompanied by -</b>		<b>Attachment Number</b>	<b>Checked by Applicant</b>
(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 -	Not Applicable	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	Not Applicable	Yes
(c) (ii)	the point or points at which monitoring and sampling are undertaken or are to be undertaken,	Not Applicable	Yes
(d)	such fee as is appropriate having regard to the provisions of Regulations 38 and 39.	Not Applicable	Yes

<b>Regulation 16(4)</b> 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.		<b>Attachment Number</b>	<b>Checked by Applicant</b>
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.	Not Applicable	Yes
<b>Regulation 16(5)</b> 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.		<b>Attachment Number</b>	<b>Checked by Applicant</b>
1	Signed original.	All	Yes
2	2 hardcopies of application provided or 2 CD versions of application (PDF files) provided.	All	Yes
3	1 CD of geo-referenced digital files provided.	All	Yes
<b>Regulation 17</b> 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		<b>Attachment Number</b>	<b>Checked by Applicant</b>
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
<b>Regulation 24</b> In the case of an application for a waste water discharge certificate of authorisation, the application shall –		<b>Attachment Number</b>	<b>Checked by Applicant</b>
(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,	Not Applicable	Yes
(f)	specify the content and extent of the waste water discharge, the level of treatment provided and the flow and type of discharge,	C1	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,	F1	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,	B3	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,	F2	Yes
(l)	give details of any designation under any Council Directive or Regulations that apply in relation to the receiving waters,	F1	Yes
(m)	give details of compliance with any applicable monitoring requirements and treatment standards,	F1	Yes
(n)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work,	F1	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.	Attached to Cover Letter	Yes

This is a draft document and is subject to revision.



# Waste Water Discharge Certificate of Authorisation Application Form

## Courtbrack WWTP Co. Cork

EPA Ref. N<sup>o</sup>:  
(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](http://www.epa.ie) Email: info@epa.ie

**Tracking Amendments to Draft Application Form**

<b>Version No.</b>	<b>Date</b>	<b>Amendment since previous version</b>	<b>Reason</b>
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](http://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/](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**

Courtbrack is located 14 km Northwest of Cork City and approximately 7 km Northeast of Blarney. The village lies to the north of the Shournagh River, which flows along the floor of a steep valley. Courtbrack does not have a public sewerage scheme and has no surface water drainage scheme in place. The existing houses are served by private individual septic tanks. It is proposed to construct a foul sewer collection system in the town in the near future.

This application is for a proposed WWTP with a treatment capacity of 250PE. The proposed WWTP is to be located to the west of the village and will outfall to the Shournagh River to the south of the village via a pumped and gravity outfall pipeline. Emergency storage will be provided in the WWTP and it is not proposed to have an emergency overflow from the WWTP

The proposed plant is to be procured under a Design Build Operate form of Contract. Therefore, the layout plan of the plant and detailed design of same are yet to be confirmed. However, an indicative WWTP layout plan is included as attachment A1.

As the WWTP is to be procured under a DBO Contract, the DBO Contractor will be responsible for carrying out sampling and analysis. The purpose of the sampling and analysis is to monitor compliance with the proposed discharge standards. The DBO Contractor shall arrange for regular independent laboratory analysis throughout the O&M Phase. Flow measurement of the final effluent shall be downstream of any extraction points for re-use of effluent. Flow proportional or time based 24 hour samples shall be collected at the same well defined point at the inlet and outlet of the treatment works in order to monitor compliance with the requirements.

The majority of the flow to the WWTP will comprise domestic effluent, with a relatively small portion of the flow originating at commercial businesses such as shops and hairdressers.

The design hydraulic load on the WWTP will be 45m<sup>3</sup>/day, based on a 250PE design loading and 180l/PE/day. The following table summarises the treatment standards for the proposed WWTP.

<b>WWTP Effluent Discharge Standards</b>		
<b>Parameter</b>	<b>Limit</b>	<b>Units</b>
Biochemical Oxygen Demand (BOD <sub>5</sub> )	25	mg/l
Chemical Oxygen Demand	125	mg/l
Suspended Solids (SS)	35	mg/l
Total Ammonia	2	mg/l-N
Nitrate	15	mg/l-N
Orthophosphate	2	mg/l-PO <sub>4</sub>

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## SECTION B: GENERAL

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

### B.1 Agglomeration Details

<b>Name of Agglomeration:</b> Courtbrack, 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.

<b>Name*:</b>	Cork County Council
<b>Address:</b>	Southern Division
	County Hall
	Carrigohane Rd
	Cork
<b>Tel:</b>	021-4276891
<b>Fax:</b>	021-4276321
<b>e-mail:</b>	<a href="mailto:patricia.power@corkcoco.ie">patricia.power@corkcoco.ie</a>

\*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.

<b>Name*:</b>	Patricia Power
<b>Address:</b>	Area Operations South
	Cork County Council
	County Hall
	Corrigohane Rd
	Cork
<b>Tel:</b>	021-4276891
<b>Fax:</b>	021-4276321
<b>e-mail:</b>	<a href="mailto:patricia.power@corkcoco.ie">patricia.power@corkcoco.ie</a>

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

#### Co-Applicant's Details

<b>Name*:</b>	
<b>Address:</b>	
<b>Tel:</b>	
<b>Fax:</b>	
<b>e-mail:</b>	

\*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.

See attachment B1 for the boundary of the agglomeration to be served by the proposed WWTP.

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.

There is currently no WWTP in Courtbrack village. An indicative site layout plan has been included in attachment B2, along with the location of the proposed discharge point.

<b>Name*:</b>	Noreen O'Mahony
<b>Address:</b>	Cork County Council Ballincollig/Blarney Water Services Office
	Innishmore
	Ballincollig
	Co Cork
<b>Grid ref (6E, 6N)</b>	Proposed WWTP Site: 155516E, 079475N
<b>Level of Treatment</b>	Tertiary

\*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.

<b>Discharge to</b>	Shournagh River
<b>Type of Discharge</b>	It is proposed to construct an outfall headwall at the location of the outfall to the Shournagh River. The outfall will be fitted with a non-return valve.
<b>Unique Point Code</b>	SW1

<b>Location</b>	Fox's Bridge, Courtbrack, Co. Cork
<b>Grid ref (6E, 6N)</b>	155,445E, 79,123N

**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.

<b>Discharge to</b>
<b>Type of Discharge</b>
<b>Unique Point Code</b>
<b>Location</b>
<b>Grid ref (6E, 6N)</b>

\*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.

Not applicable, there are no secondary discharge points in Courtbrack village.

**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.

<b>Type of Discharge</b>
<b>Unique Point Code</b>

<b>Location</b>
<b>Grid ref (6E, 6N)</b>

Not applicable, there are no storm water overflows in courtbrack

**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.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
		✓

### 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.

<b>Name:</b>	Cork County Council
<b>Address:</b>	Planning Department
	County Hall
	Carrigrohane Rd
	Cork
<b>Tel:</b>	021-4276891
<b>Fax:</b>	021-4276321
<b>e-mail:</b>	<a href="mailto:corporate.affairs@corkcoco.ie">corporate.affairs@corkcoco.ie</a>

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

<b><i>has been obtained</i></b>	✓	<b><i>is being processed</i></b>	
<b><i>is not yet applied for</i></b>		<b><i>is not required</i></b>	

<b>Local Authority Planning File Reference N<sup>o</sup>:</b>	Not applicable
---------------------------------------------------------------	----------------

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

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
	✓	

**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.

<b>Within the SFADCo Area</b>	<b>Yes</b>	<b>No</b>
		✓

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.

<b>Name:</b>	HSE South
<b>Address:</b>	Aras Slainte
	Wilton Road
	Cork
<b>Tel:</b>	021 4923774
<b>Fax:</b>	021 4923627
<b>e-mail:</b>	evelyn.murray@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.

<b>Population Equivalent</b>	<b>250PE</b>
<b>Data Compiled (Year)</b>	<b>2008</b>
<b>Method</b>	<b>Development Plan Zoning and allowance for Organic Growth. See Section B 8 (ii) for full details of the projected loading calculations.</b>

**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 following is a summary of the population projection calculations:**

1. Current domestic load (based on 15 No existing houses and an occupancy rate of 3PE per house): **45PE**
2. Current non-domestic load (Church, Community Centre and Hairdresser): **3PE**
3. Organic Growth based on current domestic and non-domestic loads above and 1.5% growth per annum between 2008 and 2033. Total future load due to Organic Growth: **69PE**
4. There is 1 no development that currently has planning permission, which comprises 12 houses (3PE per house): **36PE**
5. There is currently 7.6ha of land zoned for residential development in Courtbrack. It is estimated that approx 50% of this land may be developed before 2033. Based on a housing density of 12 per ha and occupancy rate of 3PE per house, this gives a total load of: **137PE**

The total load from items 3, 4 and 5 above result in a total estimated load in 2033 of: **242PE**

Based on the estimate above, the proposed WWTP is to have a design PE of 250.

**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 €)
Discharges from agglomerations with a population equivalent of less than 500	€3,000

Appropriate Fee Included	Yes	No
	✓	

**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.

**There is currently no WWTP serving Courtbrack. It is proposed to construct a new WWTP to serve the town. The proposed WWTP will have a design capacity of 250PE and is to be procured under a Public Private Partnership, with the capital funding for the project being provided by the private sector. It is envisaged that the WWTP will be constructed by August 2011.**

**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.

Please refer to Attachment C.1 for the envisaged/indicative WWTP site layout plan and flow diagram. As the proposed WWTP is to be procured under a Design Build Operate Contract, this layout plan is indicative only and the detailed design and layout of the plant has not yet been confirmed. The indicative layout plan is based on a conventional activated sludge process. The proposed WWTP will have a design capacity of 250PE.

#### 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.

The proposed WWTP will not include a storm water overflow.

#### 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.

There is currently no pumping station in the village. A pumping station will be constructed as part of the proposed WWTP. It is envisaged that this pumping station will comprise a sump, emergency storage, duty/standby pumps and will facilitate connection to a portable generator.

**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
	✓	



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## 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/](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/](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)**

There is currently no discharge from the Agglomeration. The proposed primary discharge (SW1) from the WWTP will operate 24 hours/day, 365 days/year. The WWTP is to have a design PE of 250 (45m<sup>3</sup>/day). The proposed discharge will comprise treated domestic effluent with the following treatment standards:

<b>WWTP Effluent Discharge Standards</b>		
<b>Parameter</b>	<b>Limit</b>	<b>Units</b>
Biochemical Oxygen Demand (BOD <sub>5</sub> )	25	mg/l
Chemical Oxygen Demand	125	mg/l
Suspended Solids (SS)	35	mg/l
Total Ammonia	2	mg/l-N
Nitrate	15	mg/l-N
Orthophosphate	2	mg/l-PO <sub>4</sub>

Copies of the relevant tables input online and referred to above have been included in Attachment D1.

There is currently no WWTP in Courtbrack and it is not known if 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) will be discharged to the receiving waters following construction of the WWTP.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
	✓	

#### 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/](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)**

Not applicable.

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
		✓

#### 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.

Not applicable there are currently no existing WWTP's in the agglomeration

#### D.2 Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

**Table D.2:**

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING	VERIFIED
SW1	PRIMARY	CORK COUNTY COUNCIL	RIVER	SHOURNAGH RIVER	NONE	155445	79123	NO

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](http://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/](http://78.137.160.73/epa_wwd_licensing/).

There is currently no discharge from the Agglomeration. The proposed discharge will comprise treated domestic effluent with the following treatment standards:

WWTP Effluent Discharge Standards		
Parameter	Limit	Units
Biochemical Oxygen Demand (BOD <sub>5</sub> )	25	mg/l
Chemical Oxygen Demand	125	mg/l
Suspended Solids (SS)	35	mg/l
Total Ammonia	2	mg/l-N
Nitrate	15	mg/l-N
Orthophosphate	2	mg/l-PO <sub>4</sub>

The WWTP is to have a design PE of 250 (45m<sup>3</sup>/day).

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/](http://78.137.160.73/epa_wwd_licensing/).

Not applicable. There is currently no storm water overflow in Courtbrack. It is also not proposed to construct same as part of the proposed sewerage scheme.

Indicate if composite sampling or continuous flow monitoring is in place on the primary or any other discharge points. Detail any plans and timescales for the provision of composite sampling and continuous flow monitoring.

The proposed WWTP is to be procured under a Design Build Operate (DBO) Contract. The following is the proposed sampling plan that the DBO Contractor will be following:

The DBO Contractor shall carry out flow measurement, sampling, and laboratory analysis throughout the O&M Phase of the DBO Contract, in accordance with Table 1 below. The purpose of the sampling and analysis is to monitor compliance with the proposed discharge standards. The DBO Contractor shall arrange for regular independent laboratory analysis throughout the O&M Phase. The DBO Contractor may also undertake such additional sampling and analysis as he feels is appropriate. Flow measurement of the final effluent shall be downstream of any extraction points for re-use of effluent. Flow proportional or time based 24 hour samples shall be collected at the same well defined point at the inlet and outlet of the treatment works in order to monitor compliance with the requirements. A refrigerated sampler is required to minimize degradation between collection and analysis.

The procedures will include independent analysis, at an accredited laboratory, of the statutory samples. The DBO Contractor shall be responsible for developing and implementing



procedures to remedy defects in his laboratory procedures where the independent checking shows variations of more than  $\pm 10\%$ .

The sampling of the statutory samples shall be in accordance with the following procedures: -

- All samples shall be representative of the appropriate stream.
- Samples shall be fixed, stored and handled as per standard methods. Analysis of the samples (both Contractor's and Employer's) should be undertaken within 24 hours and reported when the results are available to the Employer's Representative within 48 hours. Exceptions are BOD, metals and pathogens, which should be reported within 7 days.
- Analysis of samples by the Contractor shall be carried out in accordance with the methods specified in the latest editions of:-
  - i. The "Standard Method of Examination of Water and Wastewater" (APHA)
  - ii. Urban Wastewater Treatment Regulations, 2001 (SI No. 254 of 2001)
  - iii. The "Methods of the Examination of Waters and Associated Materials" published by the HMSO (UK)
- As specified, representative laboratory analysis shall be undertaken at an accredited laboratory approved by the Employer's Representative, who reserves the right, in the case of an independent laboratory, to visit the premises in order to ascertain that the testing is being carried out accurately, and in accordance with accepted procedures.

The results of all sampling and analysis shall be reported to the Employer on a monthly basis. All such results and reports will be subject to the Freedom of Information Act.

During the Service Phase, and at regular, frequent and unannounced intervals, the Employer's Audit Team at the Wastewater Treatment Plant will observe the taking of samples. Such samples will be divided into three separate sub-samples, one for analysis by the Contractor, one for analysis by the Employer, one retained by the Employer for subsequent analysis by an independent accredited laboratory, if the results obtained from the analysis by the Contractor and the Employer vary by more than  $\pm 10\%$ .

It is a requirement that all SCADA signals in the WWTP are gathered at a single marshalling point at the WWTP site so that they can be transferred to an external monitoring system for the purposes of viewing the operational status of the WWTP by the Employer or an approved third party.

In addition, the Employer shall carry out random sampling and monitoring at his discretion, as detailed in Table 2.

**Table 1 - Sampling and Monitoring Requirements by O&M Contractor**

Location	Parameter	Frequency	Sample Method	Output	Purpose	
<b>Inlet to treatment process</b>	Raw Influent Flow	Continuous	Integrated Flow Meter	Daily Flow - m <sup>3</sup>	Payment	
				Daily Flow Profile	Monitoring	
	BOD <sub>5</sub>	Once Monthly <sup>1</sup>	Refrigerated 24 hour Composite Flow-Proportional	mg/IBOD <sub>5</sub> And Kg. B OD <sub>5</sub> day		
	Total Phosphorous (P)		24 hour Composite Flow-Proportional	mg/l P		
Total Ammonia (measured as N) Total Nitrogen as N Suspended Solids COD	24 hour Composite Flow-Proportional		mg/l N			
<b>Outlet from treatment process</b>	BOD <sub>5</sub>	Once Weekly <sup>3</sup>	Refrigerated 24 hour Composite Flow-Proportional	mg/IBOD <sub>5</sub> and kg. BOD <sub>5</sub> day	Compliance	
	Suspended Solids			mg/l SS		
	Orthophosphates (P) Total Phosphate (P)			mg/l P		
	Total Ammonia (measured as N) Total nitrogen as N			mg/l N		
	COD			24 hour Composite Flow-Proportional	Daily Average - mg/l COD	Monitoring
				Daily COD Profile		
	Nitrate				mg/l N	Monitoring Compliance
	Flow	Continuous	Approved Measuring Device	Daily Flow - m <sup>3</sup>	Monitoring	
Daily Flow Profile				Monitoring		
<b>Treatment Plant</b>	Dry Solids Concentration of Sludge	Weekly Totals	Approved Measuring Devices	Weekly Average % Dry Solids	Monitoring	
	Net Dry solids Weight of Sludge Disposed off site.			Weekly Weight - kgs.		

**Notes on Table 1**

1 Altering days and times as determined by Liaison Monitoring Committee

**Table 2 - Random Sampling and Monitoring by Employer**

Location	Parameter	Frequency	Sample Method	Output	Purpose
Outlet from treatment process	BOD <sub>5</sub>	Random Without Prior Notice	Refrigerated 24 hour Composite Flow-Proportional	Mg/IBOD <sub>5</sub> And Kg. BOD <sub>5</sub> day	Compliance <sup>1</sup>
	Suspended Solids		24 hour Composite Flow-Proportional  Or Grab	Mg/l SS	
	Orthophosphates (P) Total Phosphate			Mg/l P.	
	Ammonium (measured as N) Total Nitrogen -N			Mg/l N.	
	COD			Daily Average - Mg/l COD	
	Nitrates			mg/l N	

**E.2. Monitoring and Sampling Points**

Programmes for environmental monitoring should be submitted as part of the application. These programmes should be provided as Attachment E.2.

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

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

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

<b>Attachment included</b>	<b>Yes</b>	<b>No</b>
		✓

Refer to section E1 above for the sampling plan for the proposed WWTP. Sampling will be carried out by the DBO Contractor in the short term. Long term the WWTP will be operated and maintained by Cork County Council.

2 No. proposed river monitoring points are included on Map 3, which is included in Attachment B2. These monitoring points are both at bridges on the Shournagh River and are labelled aSW-2u (upstream of the proposed discharge point SW1) and aSW-1d (downstream of the proposed discharge point SW1).

**E.3. Tabular data on Monitoring and Sampling Points**

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

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](http://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.

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
FW1	WWTP INLET	M	TBC	TBC	NO
FW2	WWTP OUTLET	M	TBC	TBC	NO
aSW-2u	RIVER MONITORING PT UPSTREAM OF SW1	M	153719	80021	NO
aSW-1d	RIVER MONITORING PT DOWNSTREAM OF SW1	M	158165	76569	NO

The exact locations of monitoring and sampling points within the proposed WWTP are yet to be confirmed as the WWTP is to be procured under a Design Build Operate Contract. Details of the proposed monitoring and sampling points at the inlet and outlet from the proposed WWTP, along with the proposed river quality monitoring points are included in the table above.

#### 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.

Not applicable, there is currently no WWTP in Courtbrack.

**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/](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.

Sampling results for the receiving waters at the proposed discharge location (SW1) have been input at the link above. Refer to attachment F1 for river water quality data recorded at the proposed discharge location between June 2006 and December 2008. Monitoring has not been carried out at locations upstream and downstream of the proposed discharge location (SW1). However, monitoring will be carried out upstream and downstream of SW1 following the construction of the proposed WWTP.

The assimilative capacity calculations for the proposed WWTP are included in attachment F1.

- 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/](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.

Not applicable.

- 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.

Not applicable

- 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.

See attachment F1 for the River Shournagh quality data from the EPA River Water Quality Report 2005 relating to samples taken from the following locations:

- 0025 Br SE of Coolmona
- 0100 Ballyvodane Br
- 0200 E of Gortdonaghmore
- 0300 Tower Br (d/s Martin R confl)
- 0500 Bannow Br

Also included in attachment F1 is the river water quality data recorded at the proposed discharge location (SW1) between June 2006 and December 2008. The data indicates that the water is of a satisfactory standard.

- 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.

There is currently no WWTP in Courtbrack. The proposed WWTP will primarily treat domestic waste water. It is envisaged that the levels of dangerous substances in the effluent will be such that they are unlikely to impair the environment.

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

The closest downstream drinking water abstraction point is at Cork City on the River Lee. This abstraction point is located approximately 16.5km downstream of the proposed discharge point. It is not envisaged that the proposed discharge will have any effect on the existing abstraction point.

- Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on –
  - (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive) —

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

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

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

- o 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.**

The closest site to the proposed Courtbrack discharge location is the Shournagh River Valley proposed Natural Heritage Area. The proposed discharge is located approximately 2.5km upstream of the proposed NHA. See attachment F1 for the site synopsis and location of the proposed NHA relative to the proposed discharge location.

The next closest site is the Lee Valley proposed NHA which is located approximately 14km downstream of the proposed discharge location. The site synopsis is included in attachment F1.

A preliminary screening assessment has been carried out in accordance with Circular L8/08 for both the above sites. Using the flow diagram in Appendix 1 of the Circular, it has been determined that no further action is required in terms of impact assessment as the qualifying habitats and species in each of the sites are not deemed to be water dependant. See Attachment F1 for a copy of the flow diagram used in the preliminary screening assessment.

Attachment included	Yes	No
	✓	

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

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

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

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

An individual record (i.e. row) is required for each abstraction point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at [www.epa.ie](http://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.

See attachment F2 for details of the closest downstream abstraction point. It is not envisaged that the proposed discharge will have any effect on the water abstraction point.

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## SECTION G: PROGRAMMES OF IMPROVEMENTS

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

### G.1 Compliance with Council Directives

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

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

The proposed WWTP will be designed in accordance with, and take cognisance of, each of the above directives, where applicable. The proposed WWTP will primarily be designed in accordance with EUROPEAN COMMUNITIES ENVIRONMENTAL OBJECTIVES (SURFACE WATERS) REGULATIONS 2009. It is envisaged that the WWTP will be constructed by August 2011.

**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).

The proposed WWTP is to be designed in accordance with the EUROPEAN COMMUNITIES ENVIRONMENTAL OBJECTIVES (SURFACE WATERS) REGULATIONS 2009. Refer to Attachment F1 for the assimilative capacity calculations which are

based on the quality standards quoted in the above referenced regulations. The proposed WWTP will be designed to have a treatment standard of 2mg/l for Orthophosphate. It is envisaged that the WWTP will be constructed by August 2011.

**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.

In order to meet current design standards and to ensure that discharges from the agglomeration will not result in significant environmental pollution, the proposed WWTP will be designed in accordance with the EUROPEAN COMMUNITIES ENVIRONMENTAL OBJECTIVES (SURFACE WATERS) REGULATIONS 2009. The proposed WWTP will also not include an emergency overflow, which will limit the potential for environmental pollution.

It is envisaged that the proposed WWTP will be constructed by August 2011.

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

Attachment included	Yes	No
		✓

### G.4 Storm Water Overflows

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

Not applicable, there are currently no storm water overflows in Courtbrack and the proposed WWTP will not include an emergency or storm water overflow..

**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 <sup>Note1</sup>

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:** \_\_\_\_\_

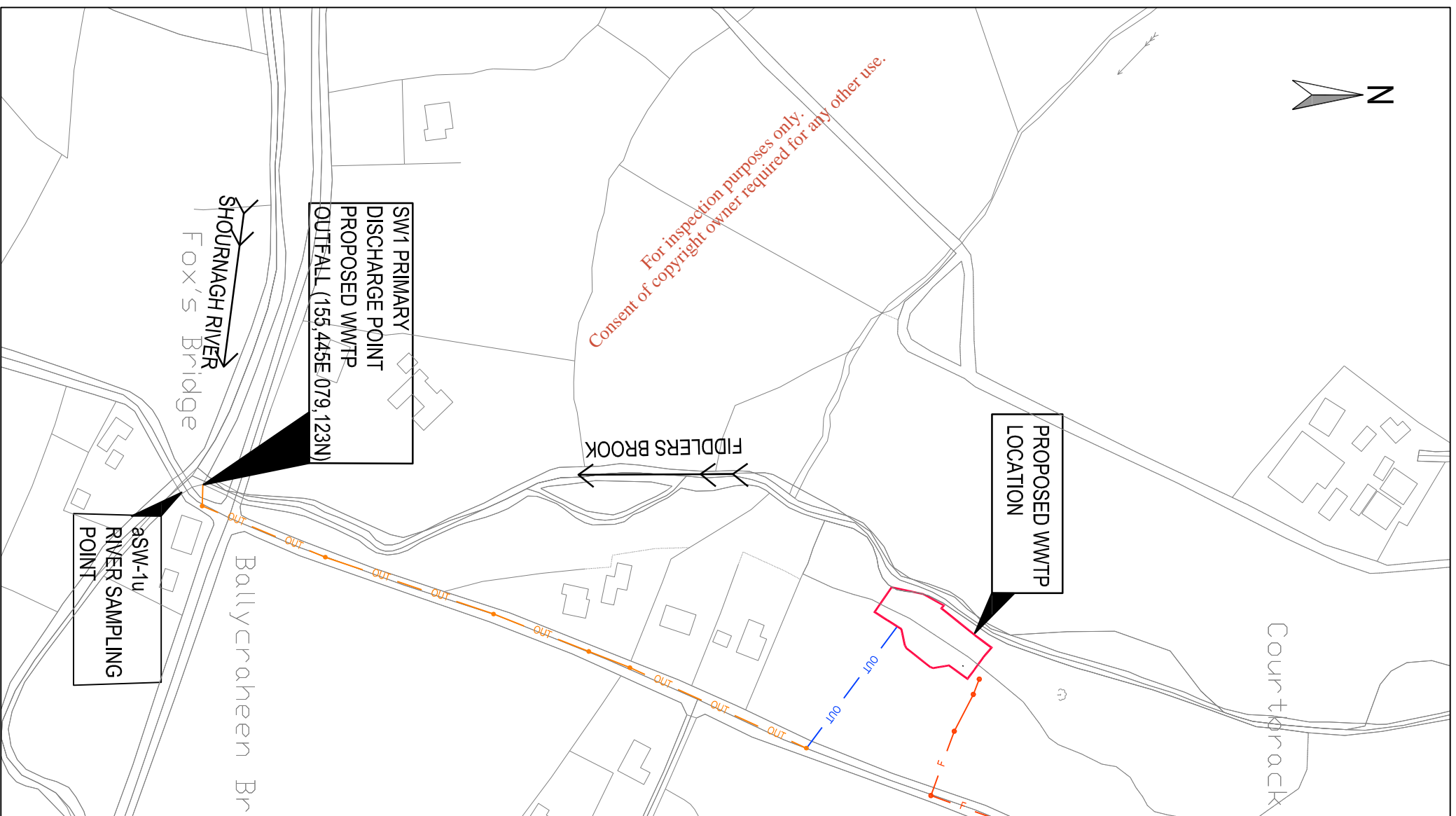
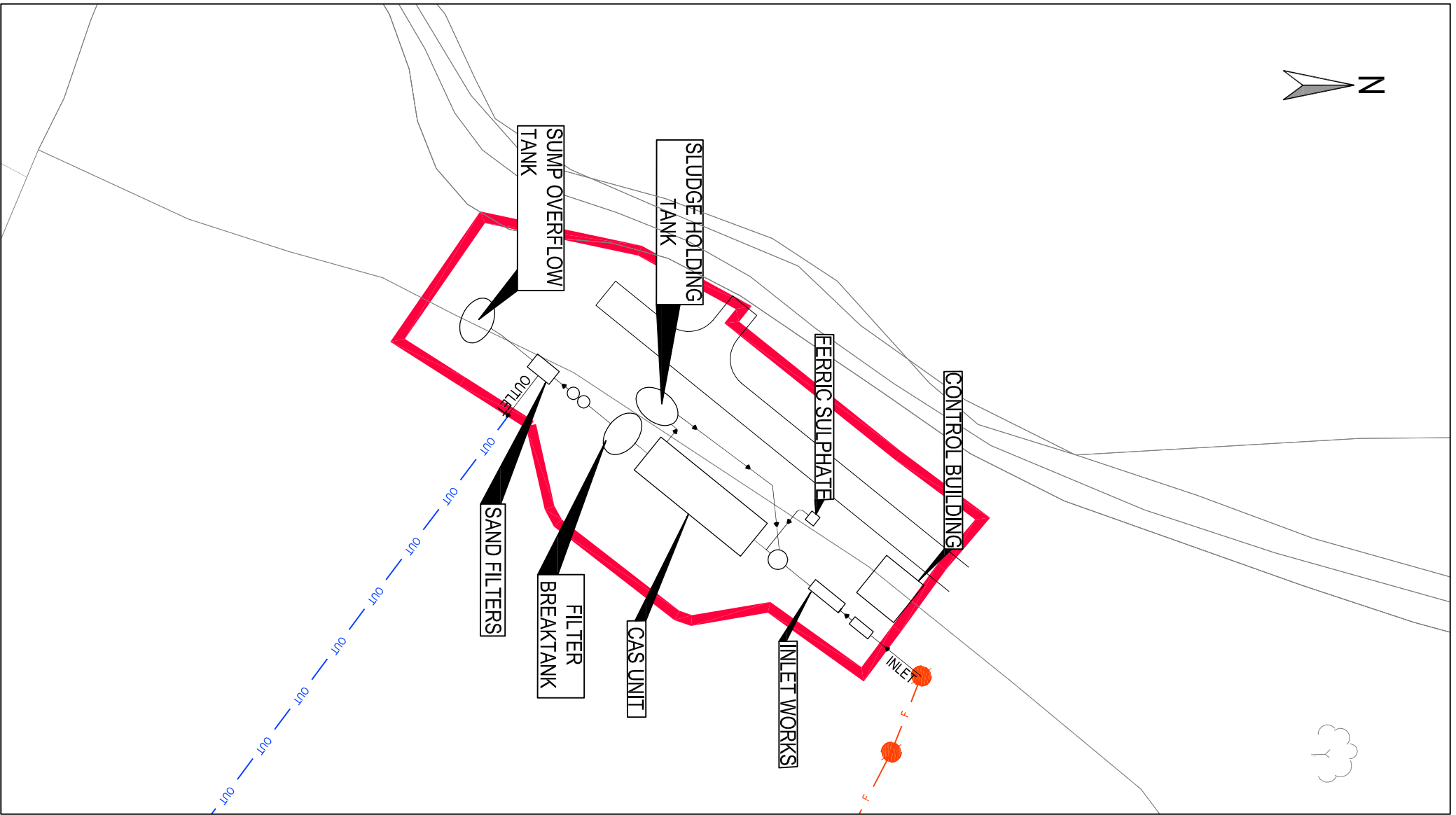
**Position in organisation:** \_\_\_\_\_

**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.



DO NOT SCALE. CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

**LEGEND**

- PROPOSED FOUL SEWER — F —
- PROPOSED OUTFALL (GRAVITY) — OUT —
- PROPOSED OUTFALL (PUMPED) — OUT —

**ATTACHMENT A.1**

REV	DESCRIPTION	BY	CHK	APP	DATE
Client:	CORK COUNTY COUNCIL				

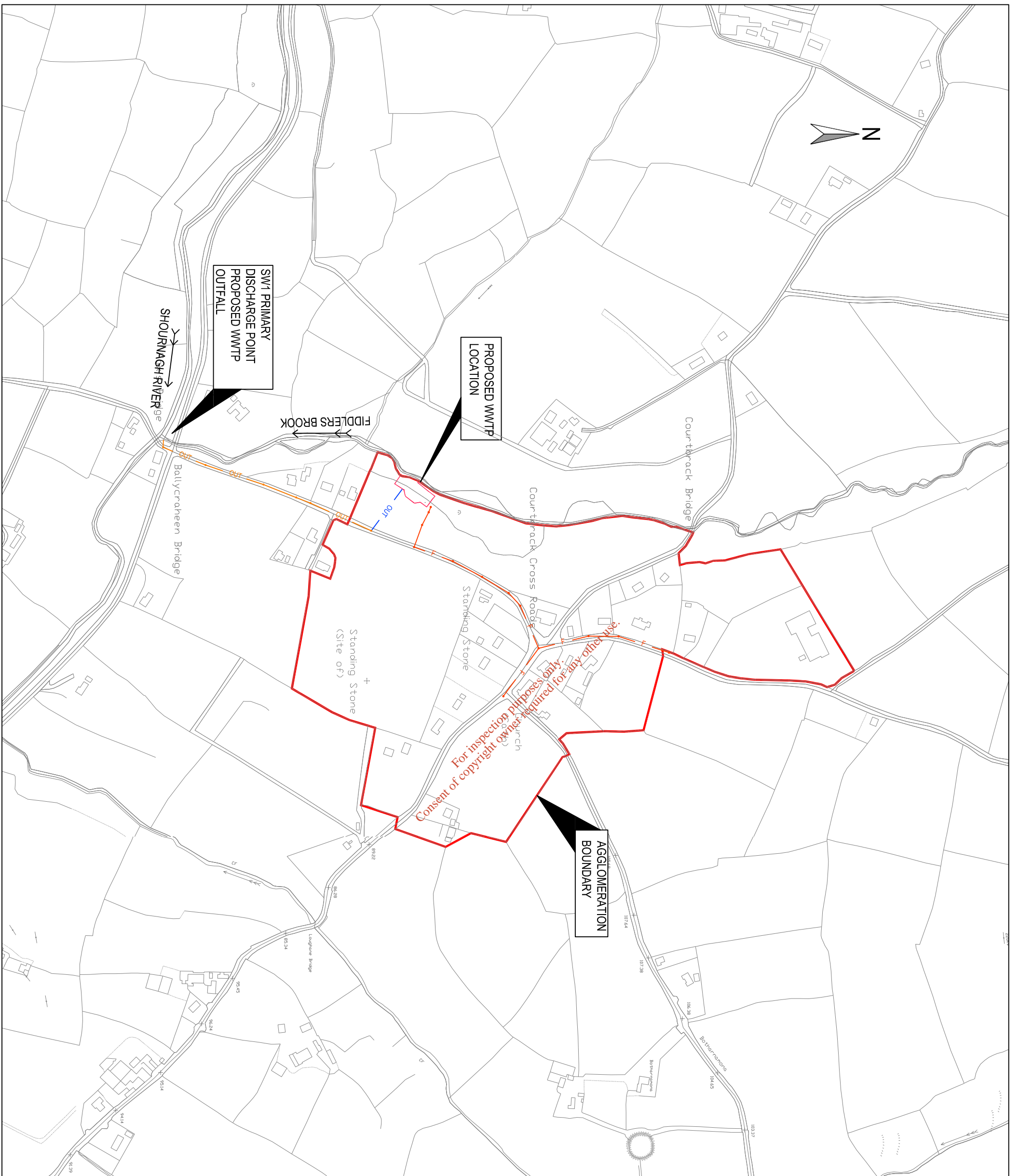
UNIT 2  
 UNIVERSITY TECHNOLOGY CENTRE  
 CIERAHEEN ROAD  
 BISHOPTOWN  
 CORK  
 TEL: +353 (0)21 4933200  
 e-mail: cork@wyg.com



Project: COURTBRACK WWTP

Drawing Title: EPA DISCHARGE CERTIFICATE  
 WWTP SITE PLAN AND DISCHARGE POINT

Scale @	A3	Drawn	Date	Checked	Date	Approved	Date
1:300	1:2500	SK	AUG 10	SC	AUG 10	KT	AUG 10
Project No.	C006808	Office	Type	Drawing No.	MAP 1	Revision	P1



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**LEGEND**

- PROPOSED FOUL SEWER — F —
- PROPOSED OUTFALL (GRAVITY) — OUT —
- PROPOSED OUTFALL (PUMPED) — OUT —

**ATTACHMENT B.1**

REV	DESCRIPTION	BY	CHK	APP	DATE

Client: CORK COUNTY COUNCIL

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CURRAHREEN ROAD  
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e-mail: cork@wvg.com

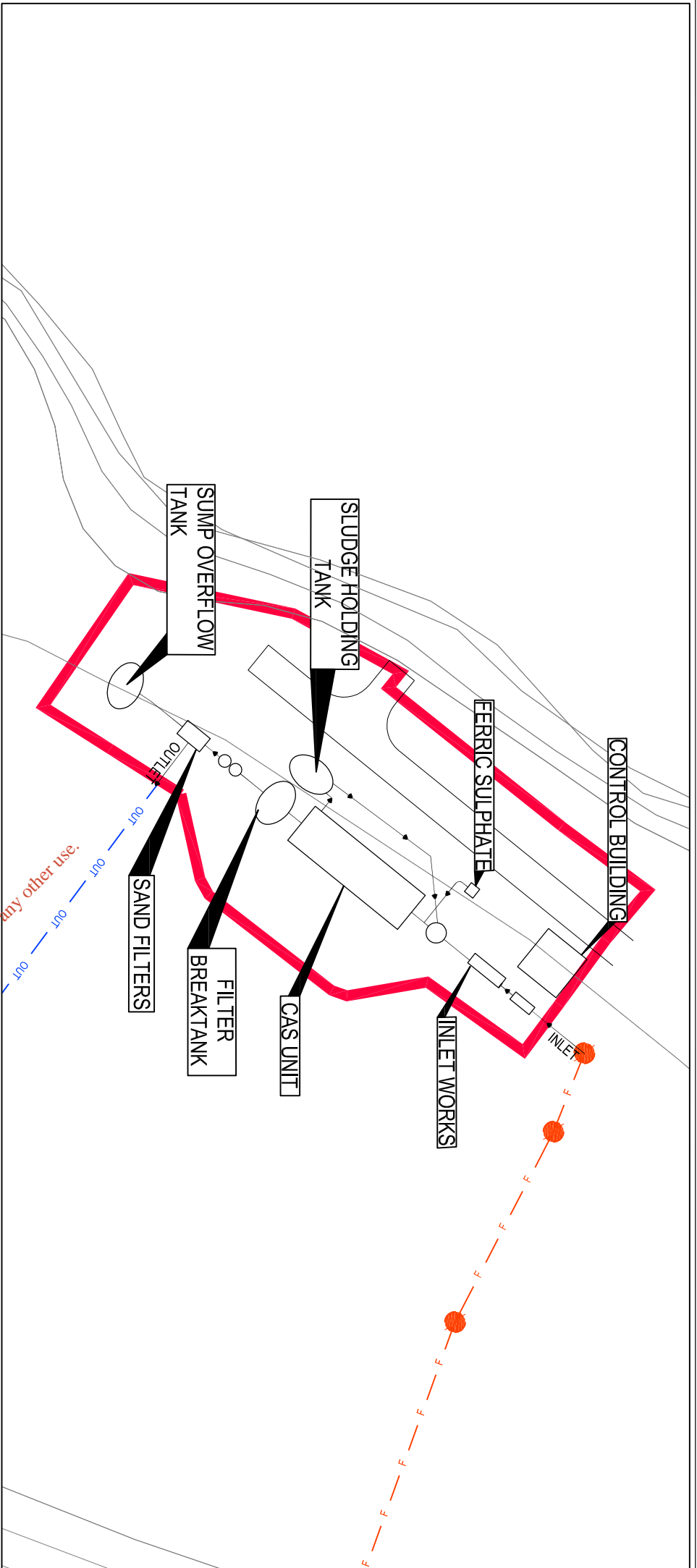
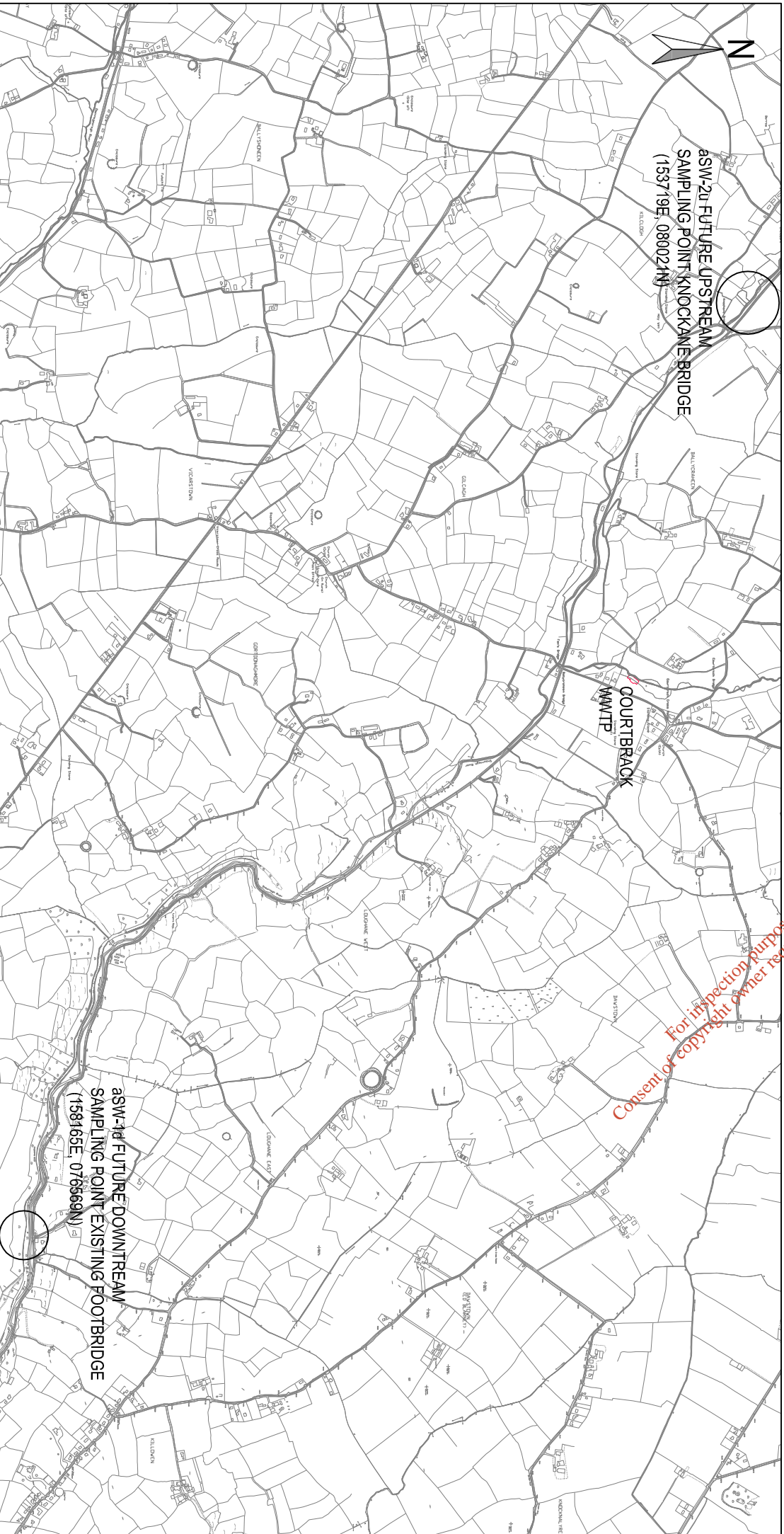
Project: COURTRACK WWTP



Drawing Title:  
EPA DISCHARGE CERTIFICATE  
AGGLOMERATION EXTENT & BOUNDARY

Scale @	Drawn	Date	Checked	Date	Approved	Date
1:5000	SK	AUG 10	SC	AUG 10	KT	AUG 10
Project No.	Office	Type	Drawing No.	Revision		
C006808	10	C	MAP 2	P1		





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**LEGEND**

- PROPOSED FOUL SEWER — F —
- PROPOSED OUTFALL (GRAVITY) — OUT —
- PROPOSED OUTFALL (PUMPED) — OUT —

**ATTACHMENT B.2**

REV	DESCRIPTION	BY	CHK	APP	DATE

Client: CORK COUNTY COUNCIL

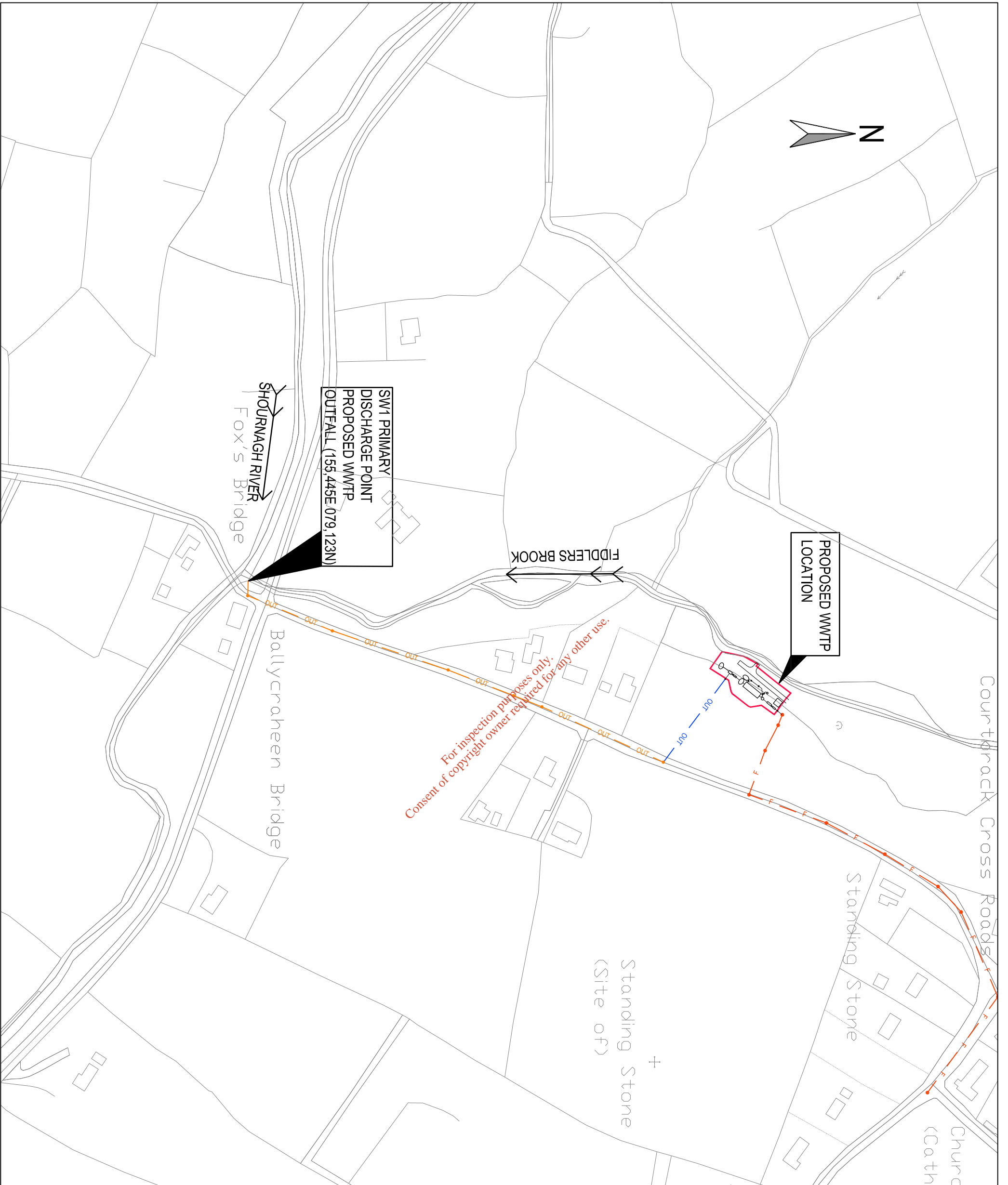
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e-mail: con@wyg.com  
Project: COURTBRACK WWTP

Drawing Title: EPA DISCHARGE CERTIFICATE  
WMTP SITE PLAN AND DISCHARGE POINT

Scale @	A3	Drawn	Date	Checked	Date	Approved	Date
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Project No.	C006808	Office Type	C	Drawing No.	MAP 3	Revision	P1



DO NOT SCALE. CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

**LEGEND**

- PROPOSED FOUL SEWER — F —
- PROPOSED OUTFALL (GRAVITY) — OUT —
- PROPOSED OUTFALL (PUMPED) — OUT —

**ATTACHMENT B.3**

REV	DESCRIPTION	BY	CHK	APP	DATE

Client: CORK COUNTY COUNCIL

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TEL: +353 (0)21 4933200  
e-mail: cork@wyg.com



Project: COURTRBACK WWTP

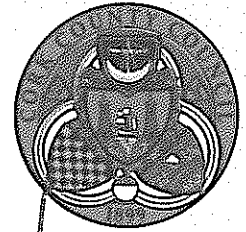
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EPA DISCHARGE CERTIFICATE  
WWTP SITE PLAN AND DISCHARGE POINT

Scale @	Drawn	Date	Checked	Date	Approved	Date
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Project No.	Office	Type	Drawing No.	Revision		
C006808	10	C	MAP 4	P1		



# Comhairle Contae Chorcaí Cork County Council

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Halla an Chontae,  
Corcaigh, Éire.  
Fón: (021) 4276891 • Faics: (021) 4276321  
Suíomh Gréasáin: [www.corkcoco.ie](http://www.corkcoco.ie)



Caroline Healy,  
Senior Staff Officer,  
WSIP Project Office,  
Model Business Park.

Direct Tel. No. (021) 4285143  
Direct Fax No. (021) 4343255  
e-mail: [mary.banks@corkcoco.ie](mailto:mary.banks@corkcoco.ie)

29<sup>th</sup> May, 2008.

WSIP PROJECT OFFICE


- 3 JUN 2008

CORK COUNTY COUNCIL

Re; Report under Article 179(3)(b) of the Planning & Development Act, 2000.  
Report under Article 81 of the Planning & Development Regulations, 2001.  
Proposed construction of a Wastewater Treatment Plant at Courtbrack, Co. Cork.

At the meeting of the Council held on the 26<sup>th</sup> May, 2008 the recommendation of the Southern Committee was approved in respect of the above.

I attach copy letter dated 27<sup>th</sup> May, 2008 from the Senior Executive Officer, Corporate, Community & Economic Development.

  
MARY BANKS,  
Clerical Officer,  
Area Operations South,  
Floor 5.

WSIP PROJECT OFFICE

30 MAY 2008

CORK COUNTY COUNCIL



# Comhairle Contae Chorcaí Cork County Council

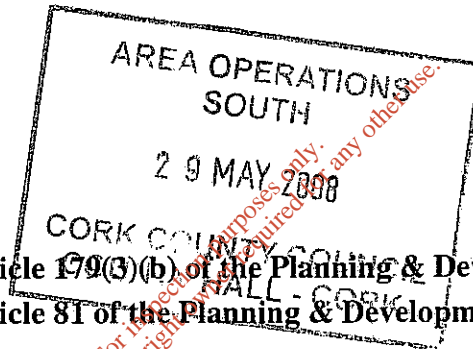
County Hall,  
Cork, Ireland.  
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Web: [www.corkcoco.ie](http://www.corkcoco.ie)  
Halla an Chontae,  
Corcaigh, Éire.  
Fón: (021) 4276891 • Faics: (021) 4276321  
Suíomh Gréasáin: [www.corkcoco.ie](http://www.corkcoco.ie)



Ms. Mary Banks,  
Area Operations South,  
Floor 5.

Direct Dial: 021-4285580  
Email: [helen.bowman@corkcoco.ie](mailto:helen.bowman@corkcoco.ie)

27<sup>th</sup> May, 2008.



Re: Report under Article 19(3)(b) of the Planning & Development Act, 2000  
Report under Article 81 of the Planning & Development Regulations 2001

- (a). Construction of a development of 26 no. Affordable Units and 32 no. Social Units with associated development works at Cloughmacsimon, Bandon, Co. Cork.
- (b). Proposed construction of 2 no. stormwater pump stations and associated pipe work in Bandon Town Centre, Co. Cork.
- (c). Proposed construction of a Wastewater Treatment Plant at Courtbrack, Co. Cork.

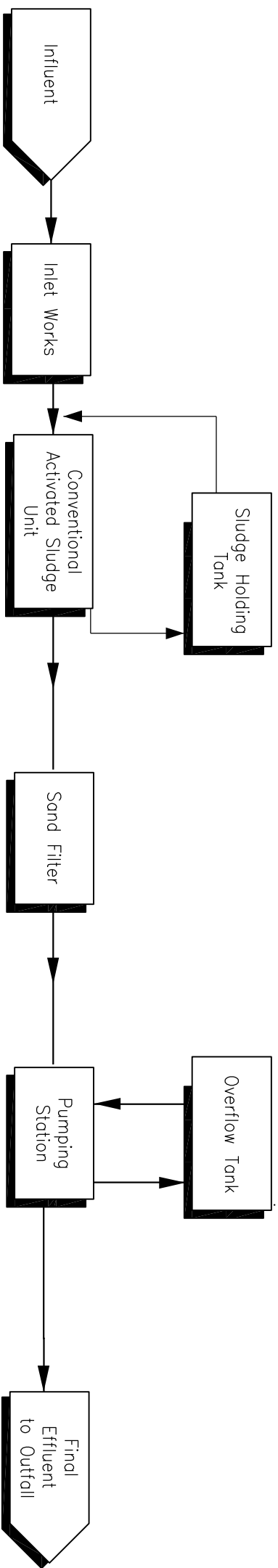
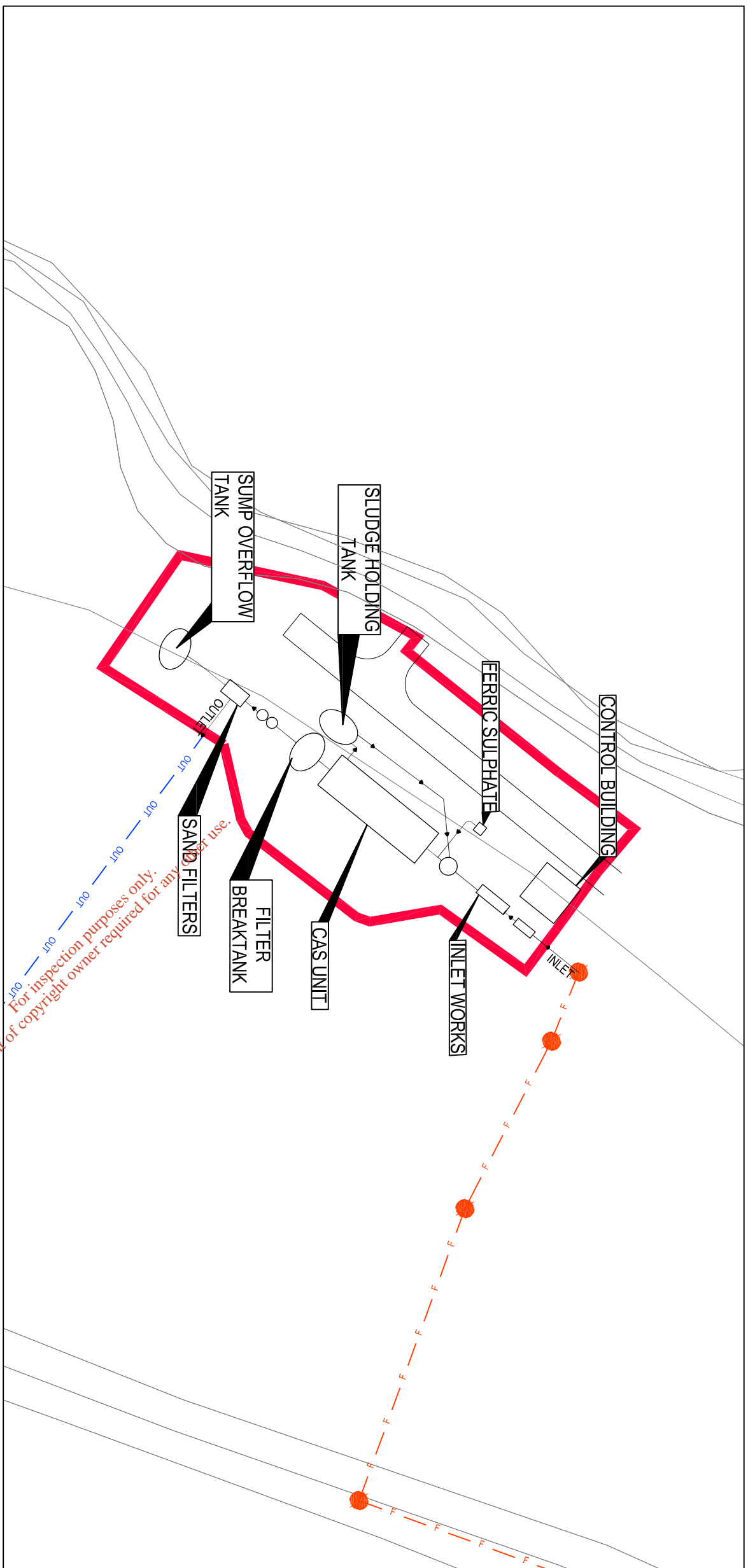
I refer to your letters dated 21<sup>st</sup> May, 2008, in connection with the above.

At the meeting of Cork County Council held on 26<sup>th</sup> May, 2008 the recommendations of the Southern Committee were approved.

I return herewith drawings.

  
MAURICE MANNING,  
SENIOR EXECUTIVE OFFICER.





DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

**LEGEND**

- PROPOSED FOUL SEWER — F —
- PROPOSED OUTFALL (GRAVITY) — OUT —
- PROPOSED OUTFALL (PUMPED) — OUT —

**ATTACHMENT C.1**

REV	DESCRIPTION	BY	CHK	APP	DATE

Client: CORK COUNTY COUNCIL

UNIT 2  
UNIVERSITY TECHNOLOGY CENTRE  
CURRAHEEN ROAD  
BISHOPTOWN  
CORK

TEL: +353 (0)21 4933200  
e-mail: cork@wyg.com

Project: COURTBRAK WWTP



Drawing Title:  
EPA DISCHARGE CERTIFICATE  
WWTP SITE PLAN AND DISCHARGE POINT

Scale @	Drawn	Date	Checked	Date	Approved	Date
1:500	SK	AUG 10	SC	AUG 10	KT	AUG 10
Project No.	Office	Type	Drawing No.	Revision		
C006808	10	C	MAP 5	P1		

## **APPLICATION FORM ATTACHMENT C1**

### **AGGLOMERATION OVERVIEW**

Courtbrack is located 14 km Northwest of Cork City and approximately 7 km Northeast of Blarney. The village lies to the north of the Shournagh River, which flows along the floor of a steep valley. Courtbrack does not have a public sewerage scheme and has no surface water drainage scheme in place. The existing houses are served by private individual septic tanks. It is proposed to construct a foul sewer collection system in the town in the near future.

### **PROPOSED PLANT DESCRIPTION**

The proposed WWTP will have a treatment capacity of 250PE and is to be located to the west of the village. The WWTP will outfall to the Shournagh River to the south of the village via a pumped and gravity outfall pipeline. Emergency storage will be provided in the WWTP and it is not proposed to have an emergency overflow from the WWTP

The proposed plant is to be procured under a Design Build Operate form of Contract. Therefore, the layout plan of the plant and detailed design of same are yet to be confirmed. However, an indicative WWTP layout plan and flow diagram are included in attachment C1.

The majority of the flow to the WWTP will comprise domestic effluent, with a relatively small portion of the flow originating at commercial businesses such as shops and hairdressers.

The design hydraulic load on the WWTP will be 45m<sup>3</sup>/day, based on a 250PE design loading and 180l/PE/day. The following table summarises the treatment standards for the proposed WWTP.

<b>WWTP Effluent Discharge Standards</b>		
<b>Parameter</b>	<b>Limit</b>	<b>Units</b>
Biochemical Oxygen Demand (BOD <sub>5</sub> )	25	mg/l
Chemical Oxygen Demand	125	mg/l
Suspended Solids (SS)	35	mg/l
Total Ammonia	2	mg/l-N
Nitrate	15	mg/l-N
Orthophosphate	2	mg/l-PO <sub>4</sub>



**WYG Ltd**

Telephone: 061-461700  
 Fax: 061-317741  
 Consulting Engineers and Project Managers

Page No. 1  
 Prep By ROS  
 Date 2008  
 Job Nr. C006808

Title **Courtbrack Sewerage Scheme - Population Projections**

**Current Domestic Load**

No of existing houses:  
 PE per house:

15  
 3

**Current Non-Domestic Load**

Church  
 Community Centre  
 Hairdresser

PE  
 1  
 1  
 1

**Total existing Domestic PE: 45**

**Total Non-Domestic PE: 3**

**Current Load**

Description	Total		
PE	48		
Flow	8.64	m <sup>3</sup> /day	based on 180 l/head/day
Load	2.88	kg/day	based on 60g BOD/head/day

Organic Growth	Domestic	Non-Domestic	Total (PE)
2008	45	3	48
25 years @ 1.5% p.a.	1.450945354	1.450945354	1.450945354
2033	65	4	69

**Future Developments**

Current development with planning permission 12 Houses **36 PE**

There is currently 7.6ha of land zoned for residential development in Courtbrack, it is envisaged that approximately 50% of this zoned land may be developed within the next 25 years

Area	Housing Density (per ha)	PE per House	Sub-Total	50% of Estimate
R-01 (2.4ha)	12	3	86	43
R-02 (5.2ha)	12	3	187	94
<b>Total</b>				<b>137</b>

**Summary**

Total PE including Organic Growth 69 PE  
 Total PE from development with planning permission 36 PE  
 Total PE from potential developments in zoned land 137 PE  
 Total 242 PE  
**Total Design PE for WWTP 250 PE**

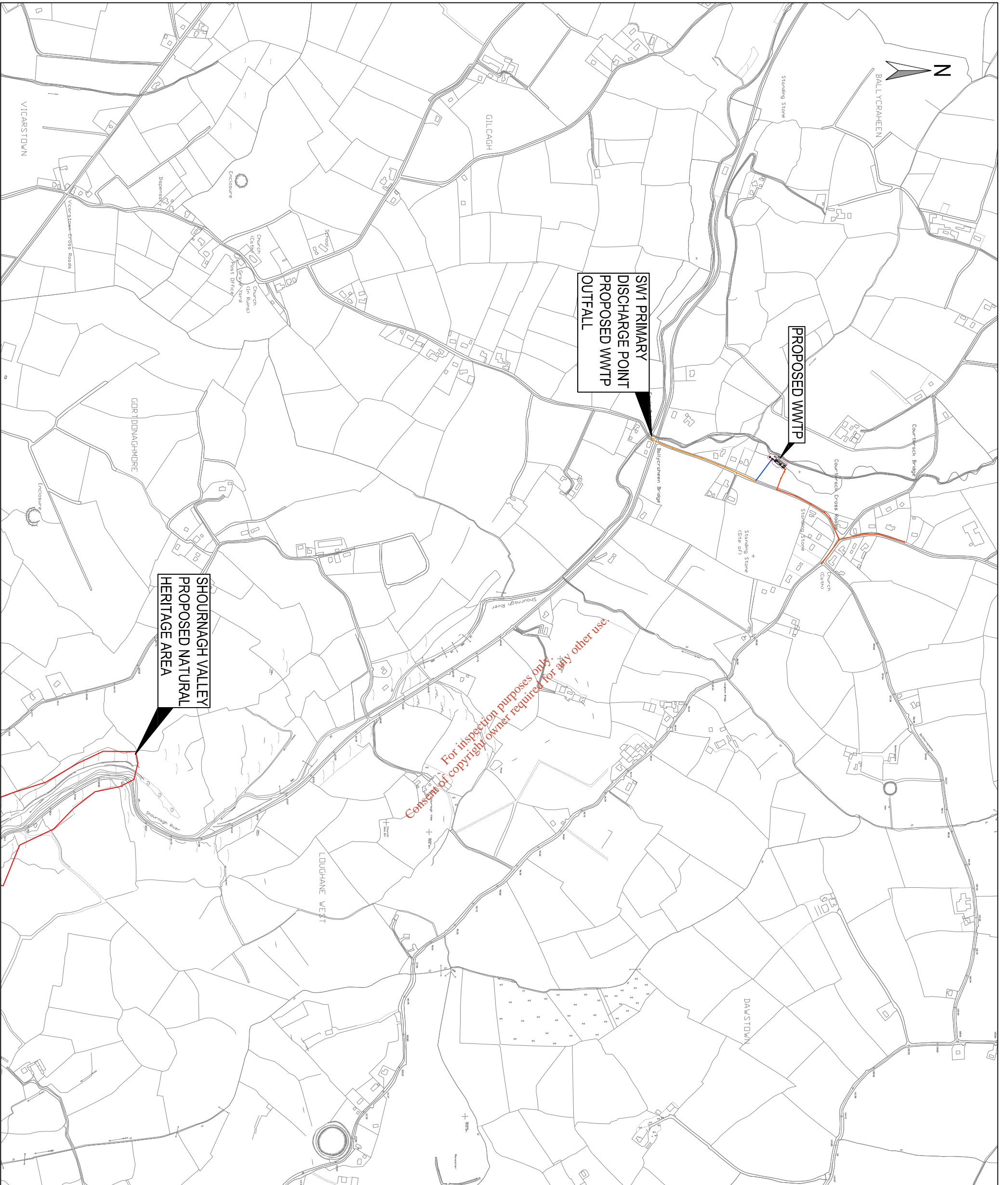
Attachment D2 - Tabular Data on Discharge Points

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING	VERIFIED
SW1	PRIMARY	CORK COUNTY COUNC	RIVER	SHOURNAGH RIVER	NONE	155445	79123	NO

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DO NOT SCALE. CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

**LEGEND**

- PROPOSED FOUL SEWER — F —
- PROPOSED OUTFALL (GRAVITY) — OUT —
- PROPOSED OUTFALL (PUMPED) — OUT —

**ATTACHMENT F.1**

REV	DESCRIPTION	BY	CHK	APP	DATE

Client: CORK COUNTY COUNCIL

UNIT 2  
UNIVERSITY TECHNOLOGY CENTRE  
CURRAHEEN ROAD  
BISHOPTOWN  
CORK



TEL: +353 (0)21 4933200  
e-mail: cork@wyg.com  
Project: COURTBRACK WWTP

Drawing Title: EPA DISCHARGE CERTIFICATE  
LOCATION OF PROPOSED NHA

Scale @	Drawn	Date	Checked	Date	Approved	Date
1:10,000	SK	AUG 10	SC	AUG 10	KT	AUG 10
Project No.	Office Type	Drawing No.	MAP	6	Revision	P1



## Hydrometric Area 19

River and Code : **SHOURNAGH** **19/S/01**  
 Tributary of : Lee (Cork) OS Catchment No: 228  
 OS Grid Ref : W 609 717 Date(s) Surveyed : 09/08/2005

Sampling Stations No. Location	Biological Quality Ratings (Q Values)									
	1976	1981	1986	1990	1994	1997	1999	2002	2005	
0025 Br SE of Coolmona	-	-	-	-	-	4-5	4	4	4	
0100 Ballyvodane Br	-	5	4-5	4-5	4	4-5	4	4	4	
0200 E of Gortdonaghmore	-	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	
0300 Tower Br (d/s Martin R confl)	-	5	4-5	4	4-5	4	3-4	3-4	3-4	
0500 Bannow Br	-	-	-	-	4-5	4-5	4-5	4-5	4	

**Assessment:** No change. Continuing mostly satisfactory but again slightly polluted at Tower Bridge (0300). Bannow Bridge was previously known as Leemount Bridge (O.S. 186 - 1" Series).

Sampling Stations No. Location	National Grid Ref.		Discovery Series No.	County Code
	X	Y		
0025 Br SE of Coolmona	150870	84245	80	CK
0100 Ballyvodane Br	153075	80941	80	CK
0200 E of Gortdonaghmore	156715	77115	80	CK
0300 Tower Br (d/s Martin R confl)	158570	74615	87	CK
0500 Bannow Br	160979	71803	87	CK

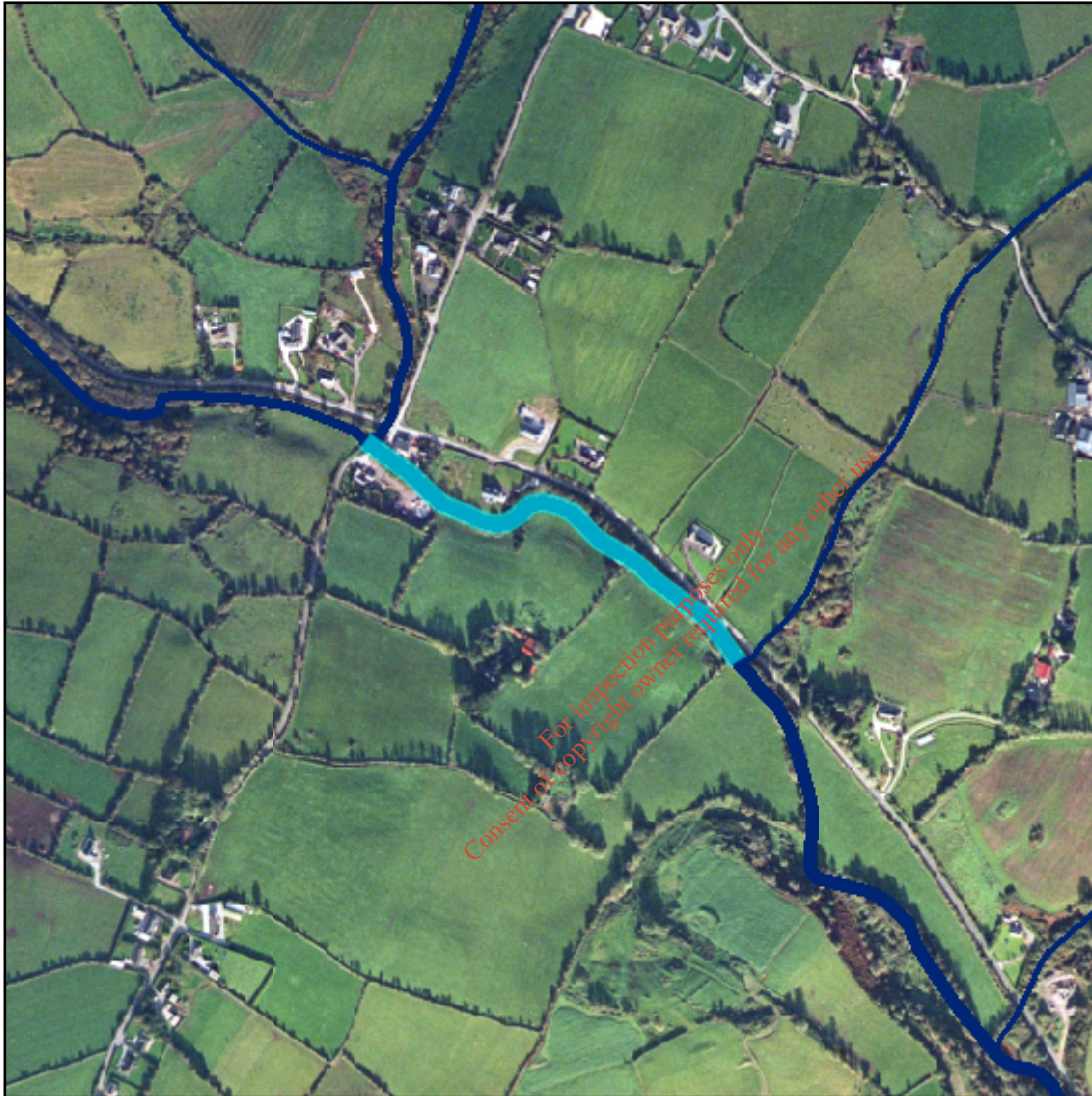
Site Altitude and Upstream Catchment Characteristics (where available):											
No.	Alt	Area	Sil	Cal	Pasture	Forestry	Bogs	Urban	Misc Ag.	Water	Other
0025	153	9	100	0	49	14	10	0.0	23	0	4
0100	96	33	100	0	66	4	5	0.0	24	0	1
0200	55	64	100	0	67	3	2	0.0	27	0	1
0300	21	164	98	2	65	4	1	1.3	27	0	2
0500	0	255	99	1	63	3	1	4.2	27	0	2

Alt is in metres Area is km<sup>2</sup> and Sil, Cal are % siliceous and calcareous bedrock and Pasture, Forestry, etc., are % of catchment area.



River Name	Shournagh (River)(19_826)
XY Location	155541,79038 (ING)

River Segment Map



Disclaimer

The source hydrometric data used to estimate the flow duration curve ordinates for ungauged catchments was obtained from (1) water level data and (2) the rating curve(s) generated for each hydrometric station. The Environmental Protection Agency and the Office of Public Works used these data, respectively, to calculate daily mean flows. The daily mean flows were then used by the Environmental Protection Agency to prepare flow duration curves for each station. Neither body accepts any liability for the subsequent handling of the data.



### Disclaimer

The source of hydrometric data used to estimate the flow duration curve ordinates for ungauged catchments was obtained from (1) water level data and (2) the rating curve(s) generated for each hydrometric station. The Environmental Protection Agency and the Office of Public Works used these data, respectively, to calculate daily mean flows. The daily mean flows were then used by the Environmental Protection Agency to prepare flow duration curves for each station. Neither body accepts any liability for the subsequent handling of the data.

The user should familiarise himself/herself with the catchment being studied and confirm that the ungauged site is in a natural catchment where flows conditions are suitable for the use of the model.

It is strongly recommended that the user examine the catchment descriptors contained in the report produced and confirm that the percentages of the various constituent elements are comparable to a natural catchment.

If the flow in a catchment is not entirely natural, the estimation of flows using the model in these catchments could be affected due to:

- existence of local conduit karst within the catchment;
- the selected location itself is on local conduit karst;
- regulation of the river flow on the river channel (e.g. power station, sluice gates etc)
- impacts of abstractions upstream of the selected location or the impact of the discharge associated with the abstraction into the same/different catchment;
- estimates of flow being sought at locations effected by storage effects at, or near, lake outfalls;
- lack of similar catchments with observed flows, ie where catchment descriptors lie outside the range of available gauging station catchments (e.g. the catchment area is under 5 km<sup>2</sup>);
- any other special circumstances that may affect river flows.

Expert judgement will be required to ensure that the estimate of flow is not unduly affected by any of these influences.

Please note that the model does not provide estimates of flood peaks and, specifically, should not be used for that purpose.

The EPA has also prepared estimates of DWF and long term 95 percentile flows which are also presented on the EPA web site. These data are presented at <http://www.epa.ie/whatwedo/monitoring/water/hydrometrics/data/>

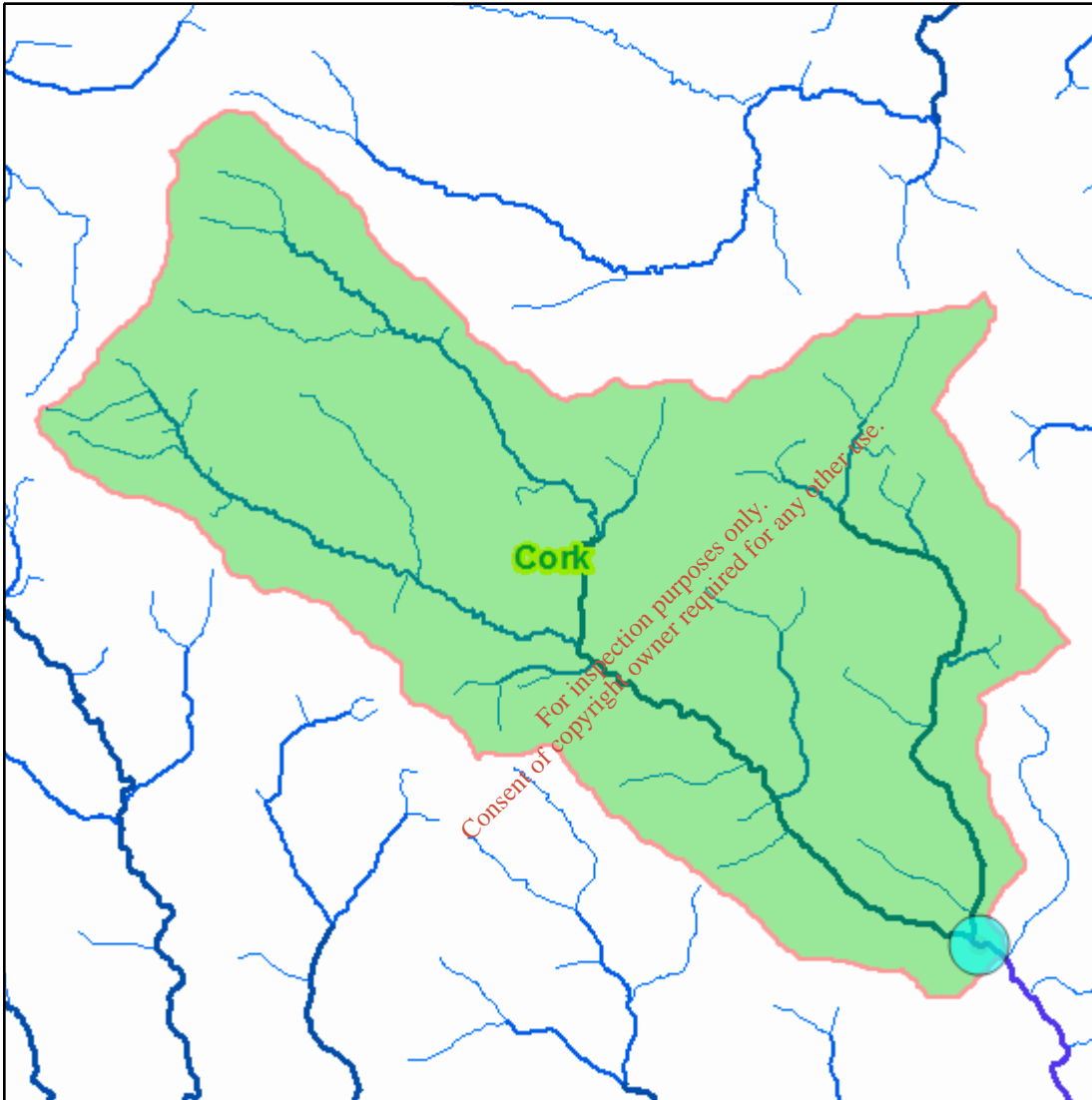
The data produced by the model for specific stations should be compared to the data contained in this file of DWF and long term 95percentile flows.

#### Disclaimer

The source hydrometric data used to estimate the flow duration curve ordinates for ungauged catchments was obtained from (1) water level data and (2) the rating curve(s) generated for each hydrometric station. The Environmental Protection Agency and the Office of Public Works used these data, respectively, to calculate daily mean flows. The daily mean flows were then used by the Environmental Protection Agency to prepare flow duration curves for each station. Neither body accepts any liability for the subsequent handling of the data.

River Name	Shournagh (River)(19_826)
XY Location	155541,79038 (ING)

**Nested Catchment Map**

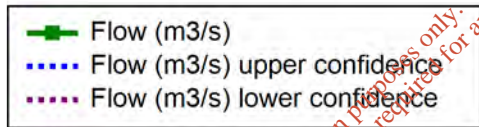
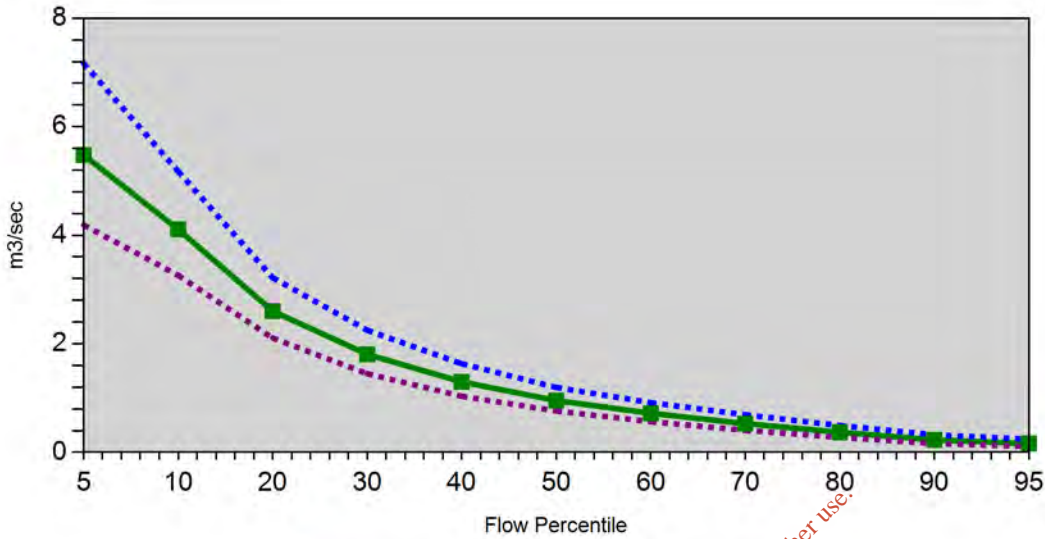


**Disclaimer**  
The source hydrometric data used to estimate the flow duration curve ordinates for ungauged catchments was obtained from (1) water level data and (2) the rating curve(s) generated for each hydrometric station. The Environmental Protection Agency and the Office of Public Works used these data, respectively, to calculate daily mean flows. The daily mean flows were then used by the Environmental Protection Agency to prepare flow duration curves for each station. Neither body accepts any liability for the subsequent handling of the data.





**Flow Duration Curve (Flow in m3/sec)**



%ile	flow(m3/sec)	upper 95% confidence limit m3/sec	lower 95% confidence limit m3/sec
5	5.479	7.167	4.189
10	4.109	5.178	3.261
20	2.603	3.218	2.106
30	1.806	2.25	1.449
40	1.298	1.632	1.033
50	0.954	1.196	0.762
60	0.719	0.915	0.565
70	0.529	0.691	0.405
80	0.37	0.494	0.277
90	0.229	0.323	0.162
95	0.162	0.243	0.108

**Disclaimer**

The source hydrometric data used to estimate the flow duration curve ordinates for ungauged catchments was obtained from (1) water level data and (2) the rating curve(s) generated for each hydrometric station. The Environmental Protection Agency and the Office of Public Works used these data, respectively, to calculate daily mean flows. The daily mean flows were then used by the Environmental Protection Agency to prepare flow duration curves for each station. Neither body accepts any liability for the subsequent handling of the data.



Catchment Descriptors		
General		
Descriptor	Unit	Value
Area	sq km	55.1
Average Annual Rainfall (61-90)	mm/yr	1262
Stream Length	km	65.8
Drainage Density	Channel length (km)/catchment area (sqkm)	1.2
Slope	Percent Slope	6.8
FARL	Index (range 0:1)	1

Soil	
Code	% of Catchment
Poorly Drained	3.2
Well Drained	94.3
Alluvmin	2.3
Peat	0.3
Water	0
Made	0

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Subsoil Permeability		
Code	Explanation	% of Catchment
H	High	0
M	Moderate	55.6
L	Low	0
ML	Moderate/Low	0.8
NA	No Subsoil/Bare Rock	43.5

Aquifer		
Code	Explanation	% of Catchment
LG_RG	LG: Locally important sand-gravel aquifer RG: Regionally important sand-gravel aquifer	0
LL	Locally important aquifer which is moderately productive only in local zones	100
LM_RF	LM: Locally important aquifer which is generally moderately productive RF: Regionally important fissured bedrock aquifer	0
PU_PL	PU: Poor aquifer which is generally unproductive PL: Poor aquifer which is generally unproductive except for local zones	0
RKC_RK	Regionally important karstified aquifer dominated by conduit flow	0
RKD_LK	Regionally important karstified aquifer dominated by diffuse flow	0

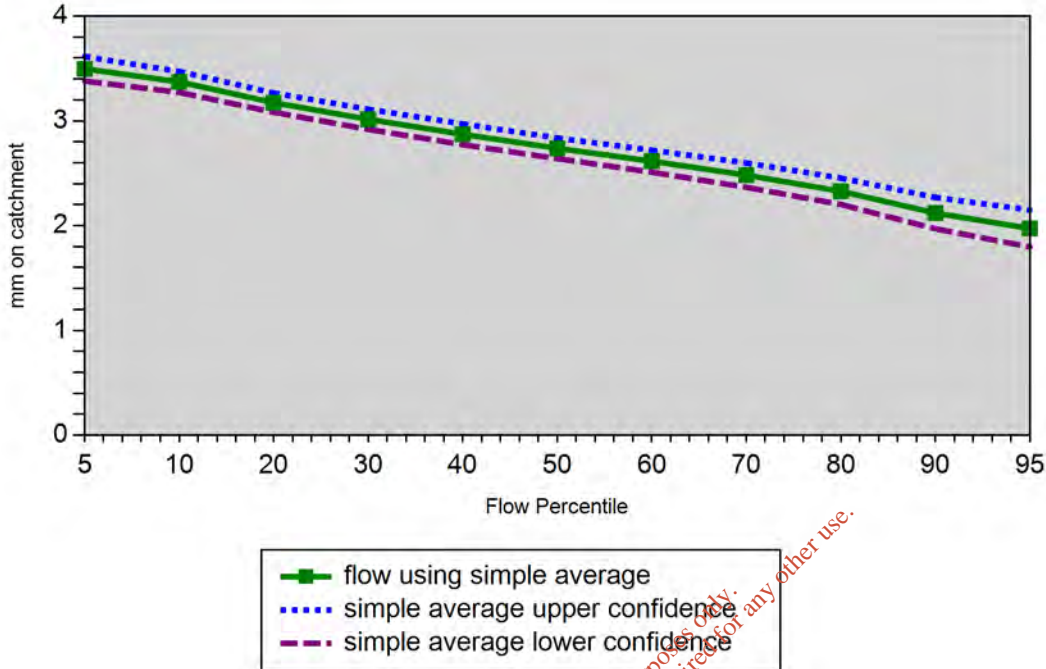
Stations in Pooling group			
%ile Flow	Station 1	Station 2	Station 3
5	23005	19044	34009
10	23005	19044	34009
20	23005	19044	34009
30	23005	19044	34009
40	23005	34009	19044
50	19032	19044	19001
60	19032	19044	19001
70	19032	19044	19001
80	19032	19044	19001
90	19032	19044	19001
95	19032	19044	19001

**Disclaimer**

The source hydrometric data used to estimate the flow duration curve ordinates for ungauged catchments was obtained from (1) water level data and (2) the rating curve(s) generated for each hydrometric station. The Environmental Protection Agency and the Office of Public Works used these data, respectively, to calculate daily mean flows. The daily mean flows were then used by the Environmental Protection Agency to prepare flow duration curves for each station. Neither body accepts any liability for the subsequent handling of the data.



**Flow Duration Curve (mm on catchment)**



Log Flow (mm on catchment)			
%ile	mm	upper 95% confidence limit	lower 95% confidence limit
5	3.497	3.614	3.38
10	3.372	3.472	3.272
20	3.174	3.266	3.082
30	3.015	3.111	2.919
40	2.872	2.971	2.773
50	2.738	2.836	2.64
60	2.615	2.72	2.51
70	2.482	2.598	2.366
80	2.328	2.454	2.202
90	2.12	2.27	1.97
95	1.973	2.149	1.797

**Disclaimer**

The source hydrometric data used to estimate the flow duration curve ordinates for ungauged catchments was obtained from (1) water level data and (2) the rating curve(s) generated for each hydrometric station. The Environmental Protection Agency and the Office of Public Works used these data, respectively, to calculate daily mean flows. The daily mean flows were then used by the Environmental Protection Agency to prepare flow duration curves for each station. Neither body accepts any liability for the subsequent handling of the data.



## **COURTRACK PROPOSED WWTW - ASSIMILATIVE CAPACITY**

**Table 1 - Surface Waters Regulations 2009**

Parameter	River Water Body
BOD (mg/l)	Good Status (GS) ≤ 1.5 (mean) ≤2.6 (95%ile)
Total ammonia as N (mg/l)	Good Status (GS) ≤ 0.065 (mean) ≤0.14 (95%ile)
MRP as Phosphorus (mg/l)	Good Status (GS) ≤ 0.035 (mean) ≤0.075 (95%ile)

### **BOD**

<b>ASSIMILATIVE CAPACITY FORMULA: (Cmax - Cback) x F95 x</b>	
F95 = <b>95%ile</b> Flow in river	0.108 m <sup>3</sup> /sec
Cback = background parameter level in river	2.000 mg/l
Cmax = Max. allow. parameter level in the river	2.600 mg/l
Assimilative capacity of river at 95%ile flow	5.60 kg
WWTW Desing PE	250 PE
WWTW Design Dry Weather Flow	45000 L/day
Max. allow level of parameter in effluent	124 mg/l
Proposed level (DBO Contract)	<b>25 mg/l</b>

(see table 1 above)

(180l/h/d)

### **Phosphorus**

<b>ASSIMILATIVE CAPACITY FORMULA: (Cmax - Cback) x Fm x</b>	
Mean Flow in river	0.7620 m <sup>3</sup> /sec
Cback = background parameter level in river	0.030 mg/l
Cmax = Max. allow. parameter level in the river	0.035 mg/l
Assimilative capacity of river at Mean flow	0.33 kg
WWTW Desing PE	250 PE
WWTW Design Dry Weather Flow	45000 L/day
Max. allow level of parameter in effluent	7.32 mg/l
Proposed level (DBO Contract)	<b>2 mg/l</b>

(see table 1 above)

(180l/h/d)

### **Ammonia**

<b>ASSIMILATIVE CAPACITY FORMULA: (Cmax - Cback) x F95 x</b>	
Mean Flow in river	0.762 m <sup>3</sup> /sec
Cback = background parameter level in river	0.060 mg/l
Cmax = Max. allow. parameter level in the river	0.140 mg/l
Assimilative capacity of river at 95%ile flow	5.27 kg
WWTW Desing PE	250 PE
WWTW Design Dry Weather Flow	45000 L/day
Max. allow level of parameter in effluent	117.04 mg/l
Proposed level (DBO Contract)	<b>2 mg/l</b>

(see table 1 above)

(180l/h/d)

Proposed Discharge Limits	BOD	SS	MRP as P	Total Amm as N
mg/l	<b>25</b>	<b>35</b>	<b>2</b>	<b>2</b>

## Hydrometric Area 19

River and Code : **SHOURNAGH** **19/S/01**  
 Tributary of : Lee (Cork) OS Catchment No: 228  
 OS Grid Ref : W 609 717 Date(s) Surveyed : 09/08/2005

Sampling Stations No. Location	Biological Quality Ratings (Q Values)									
	1976	1981	1986	1990	1994	1997	1999	2002	2005	
0025 Br SE of Coolmona	-	-	-	-	-	4-5	4	4	4	
0100 Ballyvodane Br	-	5	4-5	4-5	4	4-5	4	4	4	
0200 E of Gortdonaghmore	-	5	4-5	4-5	4-5	4-5	4-5	4-5	4-5	
0300 Tower Br (d/s Martin R confl)	-	5	4-5	4	4-5	4	3-4	3-4	3-4	
0500 Bannow Br	-	-	-	-	4-5	4-5	4-5	4-5	4	

**Assessment:** No change. Continuing mostly satisfactory but again slightly polluted at Tower Bridge (0300). Bannow Bridge was previously known as Leemount Bridge (O.S. 186 - 1" Series).

Sampling Stations No. Location	National Grid Ref.		Discovery Series No.	County Code
	X	Y		
0025 Br SE of Coolmona	150870	84245	80	CK
0100 Ballyvodane Br	153075	80941	80	CK
0200 E of Gortdonaghmore	156715	77115	80	CK
0300 Tower Br (d/s Martin R confl)	158570	74615	87	CK
0500 Bannow Br	160979	71803	87	CK

Site Altitude and Upstream Catchment Characteristics (where available):											
No.	Alt	Area	Sil	Cal	Pasture	Forestry	Bogs	Urban	Misc Ag.	Water	Other
0025	153	9	100	0	49	14	10	0.0	23	0	4
0100	96	33	100	0	66	4	5	0.0	24	0	1
0200	55	64	100	0	67	3	2	0.0	27	0	1
0300	21	164	98	2	65	4	1	1.3	27	0	2
0500	0	255	99	1	63	3	1	4.2	27	0	2

Alt is in metres Area is km<sup>2</sup> and Sil, Cal are % siliceous and calcareous bedrock and Pasture, Forestry, etc., are % of catchment area.

## SITE SYNOPSIS

**SITE NAME: SHOURNAGH VALLEY**

**SITE CODE: 000103**

This site includes two lower sections of the Shournagh River c. 8km west of Cork City – this river flows south-east to join the River Lee which then flows through the City. The Shournagh River has its source in the foothills of the Boggeragh Mountains and is a fairly turbulent river, whose energy, in former times, was used to power the Mills which are now derelict along its banks.

The section furthest north-west from Cork City, comprises areas of wet woodland, scrub and an old estate mixed woodland - Cloghphilip Wood. Wet woodland areas are composed mainly of Hazel (*Corylus avellana*) and oak (*Quercus* spp.) with some Crab Apple (*Malus sylvestris*). The ground-flora species include Bilberry (*Vaccinium myrtillus*), *Rhytidiadelphus triquetrus*, Wood-sorrel (*Oxalis acetosella*) and Soft Shield-fern (*Polystichum setiferum*). In some places, Beech (*Fagus sylvatica*) has been planted. The areas of scrub are dominated by Grey Willow (*Salix cinerea*) and are developing into willow woodland with some Downy Birch (*Betula pubescens*), Hazel and Holly (*Ilex aquifolium*). They are grazed by cattle and the ground flora is composed of Common Water-starwort (*Callitriche stagnalis*), Blinks (*Montia fontana*), Bulbous Rush (*Juncus bulbosus*), Creeping Bent (*Agrostis stolonifera*) and the sedges - Glaucous Sedge (*Carex flacca*) and Common Yellow-sedge (*C. demissa*). The sloping fields adjacent to this part of the river have been abandoned for agriculture and are being colonized by the aforementioned scrub and by Bracken (*Pteridium aquilinum*), whereas the more level fields next to the site boundary are often endangered, with improved agricultural grassland grazed by sheep or cattle.

Within this section of the site is an old planted wood (Cloghphilips) co-dominated by Beech and oak with Hazel in the clearings. The ground flora species include Wood Anemone (*Anemone nemorosa*), Soft Shield-fern, Lesser Celandine (*Ranunculus ficaria*) and Bluebell (*Hyacinthoides non-scripta*); wetter areas support the growth of Meadowsweet (*Filipendula ulmaria*) and Wild Angelica (*Angelica sylvestris*). The introduced species Winter Heliotrope (*Petasites fragrans*), Greater Periwinkle (*Vinca major*) and Columbine (*Aquilegia vulgaris*) are present in parts of the wood. The spread of Sycamore (*Acer pseudoplatanus*) is also noted in this wood. On the opposite side of the river (north bank) to Cloghphilips Wood a young woodland of Hazel, willow (*Salix* spp.) and Hawthorn (*Crataegus monogyna*) is developing with a ground flora of Bramble (*Rubus fruticosus* agg.), Hemlock Water-dropwort (*Oenanthe crocata*) and Meadowsweet.

Further downstream in Codatanavally townland a golf course has been built and the grass is mown right up to the river bank and some areas of scrub woodland have also been bulldozed. The remaining woodland here is of an open structure with Beech and Ash (*Fraxinus excelsior*) being the dominant species, and a ground flora of Bracken, Bluebell and Greater Stitchwort (*Stellaria holostea*). Both Holly and Spindle (*Euonymus europaeus*) are spreading through this woodland. Wetter areas are

dominated by Alder (*Alnus glutinosa*), willow, Ash and some tall oak. Oak is also regenerating in Bracken dominated areas and like in Cloghphillips Wood, Sycamore is also spreading.

The Coolymurraghne estate woodland consists of a broadleaved woodland mostly of full grown, widely spread oak trees with a diverse understorey growth of Holly with Scaly Male-fern (*Dryopteris affinis*), but the northern end of the wood consists of Beech with pine (*Pinus* spp.) and larch (*Larix* spp.). Much of the ground is steeply sloping (c. 50 degrees) and the ground flora is sparse, possibly limited by dryness and the shading from the abundance of Holly. At the southern end of this wood is an area of old oak and Sycamore coppice, also with Holly and much Ivy (*Hedera helix*) and Navelwort (*Umbilicus rupestris*). An extensive badger sett is found here. This area grades northwards into young oak woodland with Hazel and Holly, and a ground flora of Great Wood-rush (*Luzula sylvatica*), *Mnium hornum*, Bilberry and carpets of Bluebell.

Dippers and Grey Wagtail are noted to feed along and around the river channel, with Willow Warbler and Redpoll Finches on the higher reaches of the river.

Wood Improvement Scheme grants are being sought (1993) for both Cloghphilip and Coolymurraghne woods. Both of these woods contain large fully grown oak trees, within the surrounding area. They form the most important part of the Valley's woodland. Replanting with conifers or non-native broadleaves is a major threat and the spread of non-native species such as Sycamore, may also be detrimental.

The woods along the Shournagh Valley, included in this site (103) are recommended for conservation and are noted to be of regional importance and deserving of NHA status.

4.11.2009

## SITE SYNOPSIS

**SITE NAME: LEE VALLEY**

**SITE CODE: 000094**

This site occupies five separate sections of the valley of the River Lee, immediately to the west of Cork City. One section passes close to Ballincollig, and the Ballincollig Regional Park makes up a portion of the site. A diverse range of semi-natural habitats occurs here, with those described below being the most prevalent:

Wet broadleaved woodland has developed in a number of places on the river side. The dominant trees are either Alder (*Alnus glutinosa*), Grey Willow (*Salix cinerea*) or Small-leaved Elm (*Ulmus minor*). Downy Birch (*Betula pubescens*) is often present also. Typical species occurring in the ground flora include Cock's-foot (*Dactylis glomerata*), Yorkshire-fog (*Holcus lanatus*), Canary-grass (*Phalaris* spp.), Meadowsweet (*Filipendula ulmaria*), Cuckooflower (*Cardamine pratensis*), Common Marsh-bedstraw (*Galium palustre*), Wild Angelica (*Angelica sylvestris*) and Lesser Celandine (*Ranunculus ficaria*). Other parts have abundant Hemlock Water-dropwort (*Oenanthe crocata*), Marsh-marigold (*Caltha palustris*), Yellow Iris (*Iris pseudacorus*), Fool's Water-cress (*Apium nodiflorum*) and Purple-loosestrife (*Lythrum salicaria*).

Some areas behind the riverbank are frequently flooded and support wet grassland communities. Species of the wet woodland ground flora described above occur in many of these stands, as do Sweet Vernal-grass (*Anthoxanthum odoratum*), Ribwort Plantain (*Plantago lanceolata*), Meadow Buttercup (*Ranunculus acris*), Silverweed (*Potentilla anserina*), Red Clover (*Trifolium pratense*) and Common Sorrel (*Rumex acetosa*).

Dry broadleaved woodland exists in other sections of the valley, with the most important trees being Ash (*Fraxinus excelsior*), oak (*Quercus* spp.) and Holly (*Ilex aquifolium*). Hazel (*Corylus avellana*) and Hawthorn (*Crataegus monogyna*) are important components of some stands, while the exotic species Beech (*Fagus sylvatica*) and Sycamore (*Acer pseudoplatanus*) occur in others. The ground flora of many of these woods is relatively species-rich and includes Wood Anemone (*Anemone nemorosa*), Herb-Robert (*Geranium robertianum*), Honeysuckle (*Lonicera periclymenum*), Ground-ivy (*Glechoma hederacea*), Bramble (*Rubus fruticosus* agg.), Bluebell (*Hyacinthoides non-scripta*) and False Brome (*Brachypodium sylvaticum*).

In places, Hard Fern (*Blechnum spicant*), Great Wood-rush (*Luzula sylvatica*), Male-fern (*Dryopteris filix-mas*) and Wood Speedwell (*Veronica montana*) are common, and one stand has a very well-developed shrub layer of Spindle (*Euonymus europaeus*).

Unimproved dry grassland occurs on an area of soil that has probable glacial origins. Field Wood-rush (*Luzula campestris*), Sweet Vernal-grass, Crested Dog's-tail (*Cynosurus cristatus*), Spring-sedge (*Carex caryophyllea*), Wild Carrot (*Daucus*

*carota*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Glaucous Sedge (*Carex flacca*), White Clover (*Trifolium repens*) and Cowslip (*Primula veris*) are all present here.

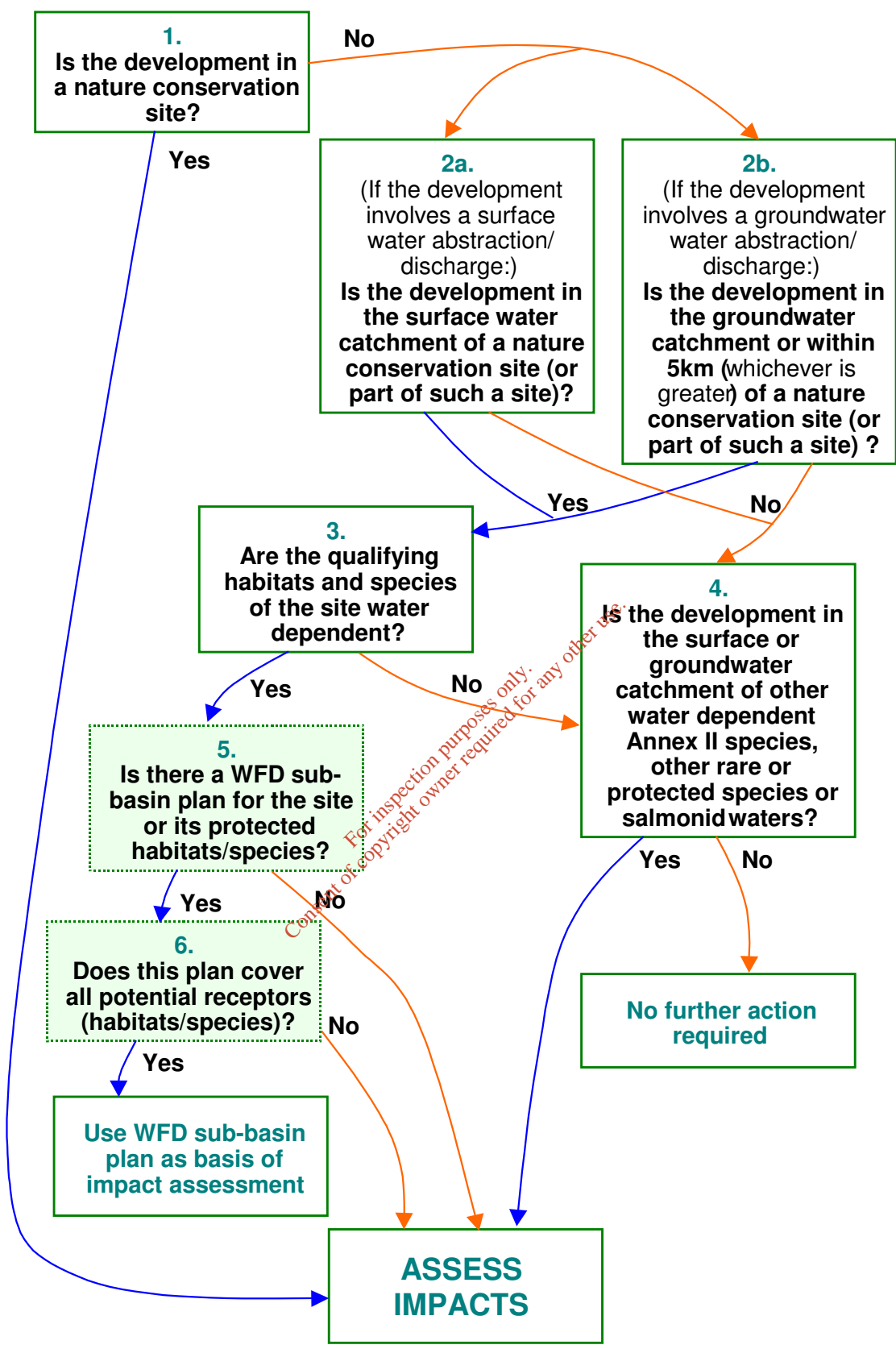
Freshwater marsh fringes the river itself in places. Here, Bulrush (*Typha latifolia*), Branched Bur-reed (*Sparganium erectum*), Bottle Sedge (*Carex rostrata*), Canary-grass, Meadowsweet, Water Horsetail (*Equisetum fluviatile*), Marsh-marigold and Water Mint (*Mentha aquatica*) are all species frequently encountered.

A number of wetland bird species breed here, including Mallard, Heron, Sedge and Grasshopper Warblers and Reed Bunting and two rather locally distributed butterflies, the Small Blue and the Wood White also occur.

Land-use in the site consists of a little cattle-grazing and hay-making in the grasslands. Sections of the valley have been improved for agriculture in the past, so that the site now consists of five sub-sites. This should not be allowed to infringe further into the site. The spread of Sycamore poses a threat to the naturalness of parts of the woodlands, as do river engineering works to the river bank communities. Recreation is important in the Valley, especially in the Ballincollig Regional Park.

The diverse range of intact semi-natural habitats in the Lee Valley makes this a site of regional conservation importance.

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ATTACHMENT F1  
Water Quality Data  
Collected at aSW-1u as per Map A1

Parameter	Unit	Sample 1 12th June '06	Sample 2 10th July '06	Sample 3 8th Aug '06	Sample 4 4th Sept '06	Sample 5 10th Oct '07	Sample 6 10th Nov '08	Sample 7 14th Dec '06	Sample 8 9th Jan '07	Sample 9 12th Feb '07	Sample 10 5th Mar '07	Sample 11 11th Apr '07	Sample 12 9th May '07	Sample 13 12th Jun '07	Sample 14 10th Jul '07	Sample 15 13th Aug '07
BOD <sub>5</sub>	mg/l O <sub>2</sub>	<2	<2	<2	<2	<4	<2	<4	<4	<2	<4	<2	<2	<2	<2	<2
COD	mg/l O <sub>2</sub>	<15	<15	<15	<15	<15	<15	15	40	21	<15	<15	<15	<15	<15	<15
Total SS	mg/l	6	<5	<5	<5	<5	<5	15	70	7	7	<5	<5	<5	12	<5
DO	mg/l O <sub>2</sub>	10.5	13.18	11.4	10.73	15.01	10.7	9.65	8.89	12.49	11.86	11.45	10.5	38.42	9.84	9.7
Temperature	°C	13.5	15	16.5	15	11.5	8.7	11	9.5	7.13	7.75	12	11.5	14.5	12.2	12
pH	-	8.1	7.83	7.6	7.08	7.66	7.68	7.6	7.37	7.37	7.2	9.17	7.08	7.07	7.33	6.6
Nitrate	mg/l NO <sub>3</sub>	26.58	25.25	19.93	17.72	26.58	30.57	27.5	20.8	24.3	26.6	27	25.69	22.6	22.1	22.1
Nitrite	mg/l NO <sub>2</sub>	<0.03	0.03	<0.03	<0.5* (N)	<0.5* (N)	<0.5* (N)	<1.6	0.07	<0.03	<0.03	<0.03	<0.03	0.02	<0.01	<0.01
Unionised Ammonia	mg/l NH <sub>3</sub>	0.0016	0.0016	0.0005	0.00016	0.00036	0.00036	0.00059	0.00086	0.00012	0.00012	0.00972	0.00012	0.06	0.06	0.004
Unionised Ammonia	mg/l N	<0.0013	<0.0013	0.0004	0.0013											
Total Ammonia	mg/l N	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.12	0.1	0.05	0.05	0.05	0.05	0.05	0.06
Total Phosphate	mg/l P	0.05	0.05	0.09	0.04	0.1	0.01	0.006	0.14	0.05	0.04	0.01	0.06	0.32	0.04	0.04
Orthophosphate	mg/l P	0.02	0.08	0.03	0.04	0.02	0.02	0.09	0.05	0.02	0.02	0.01	0.01	0.05	0.03	0.025
Conductivity	us/cm	199	178	175	215	200	204	219	182	197	184	199	231	236	171.4	200

Parameter	Unit	Sample 16 10th Sept '07	Sample 17 11th Oct '07	Sample 18 19th Nov '07	Sample 19 13th Dec '07	Sample 20 16th Jan '08	Sample 21 7th Feb '08	Sample 22 10th Mar '08	Sample 23 10th Apr '08	Sample 24 9th May '08	Sample 25 9th Jun '08	Sample 26 16th Jul '08	Sample 27 8th Aug '08	Sample 28 8th Sept '08	Sample 29 13th Oct '08	Sample 30 9th Dec '08
BOD <sub>5</sub>	mg/l O <sub>2</sub>	<2	<4	<4	<4	<4	<4	3	<4	<2	<4	<4	<2	<4	<4	4
COD	mg/l O <sub>2</sub>	<15	<15	<15	<15	15	15	42	15	15	15	15	15	15	15	15
Total SS	mg/l	<5	<5	<5	<5	<5	5	36	<5	<5	<5	<5	<5	<5	<5	<5
DO	mg/l O <sub>2</sub>	9.51	9.56	9.7	12.1	8.97	9.63	1.48	2.43	11.58	7.32	9.94	9.6	8.84	4.28	6.24
Temperature	°C	12	14.1	10.9	9.7	8.7	10.6	8	10.7	13.6	16.5	12.5	12.5 <sup>a</sup>	12.5	13	7
pH	-	7.7	6.84	7.24	7.38	7.15	7.64	7.21	8	8.9	7.92	6.89	7.7	6.99	8.05	7.37
Nitrate	mg/l NO <sub>3</sub>															
Nitrite	mg/l NO <sub>2</sub>	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01
Unionised Ammonia	mg/l NH <sub>3</sub>	0.036	0.016	0.012	0.036	0.012	0.057	0.039	0.1	1.28	0.13	0.016	0.052	0.016	0.16	0.0195
Unionised Ammonia	mg/l N															
Total Ammonia	mg/l N	0.05	0.05	0.05	0.05	0.05	0.08	0.17	0.1	0.05	0.05	0.04	0.05	0.05	0.05	0.05
Total Phosphate	mg/l P	0.05	0.05	0.06	0.02	0.02	0.06	0.23	0.02	0.03	0.05	0.08	0.08	0.04	0.05	0.03
Orthophosphate	mg/l P	0.02	0.03	0.03	0.02	0.02	0.03	0.076	0.05	0.03	0.01	0.03	0.05	0.03	N/A	0.01
Conductivity	us/cm	241	215	N/A	206	229	N/A	165	223	N/A	167	188	N/A	182.4	198.2	117.1



