## Comhairle Contae Chorcaí Cork County Council

Courthouse,
Skibbereen, Co. Cork.
Tel (028) 21299 • Fax (028) 21995
Web: www.corkcoco.ie
Teach na Cúirte,
An Sciobairín, Co. Chorcaí.
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Suíomh Gréasáin: www.corkcoco.ie



Mr. Declan Groarke, Senior Executive Engineer, Cork County Council, Courthouse, Skibbereen.

27<sup>th</sup> May 2009

Re:- Waste Water Discharge Regulations 2007.

Dear Declan,

With regard to the application to the EPA for Discharge Licences for the agglomerations with P.E.s of 500 to 1,000 listed below, I confirm the following in relation to the application fee of \$\infty\$70,000 (being \$\infty\$10,000 for each agglomeration).

Transferred to EPA Bank Account:- Account No. 1



Date Transferred to EPA Bank Account:- 21st May, 2009.

Electronic Fund Transfer Reference No.:-



Agglomerations: Ballydehob

Castletownshend Drimoleague Glengarriff Timoleague Union Hall

Ballineen/Enniskeane

This information should be included with the application to the EPA.

Yours faithfully,

Mary Notan, Staff Officer.





# Waste Water Discharge Licence Application Form

EPA Ref. Nº:
(Office use only)

#### **Environmental Protection Agency**

PO Box 3000, Johnstown Castle Estate, Co. Wexford Lo Call: 1890 335599 Telephone: 053-9160600 Fax: 053-

9160699

Web: www.epa.ie Email: info@epa.ie





## CORK COUNTY COUNCIL WESTERN DIVISION WATER SERVICES

Courthouse, Skibbereen, Co. Cork

## Re: Waste Water Discharge Licence Application for the Agglomeration of Drimoleague

Dear Sir/Madam,

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

The following documentation is enclosed:

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

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

Declan Groarke

Senior Executive Engineer

## Waste Water Discharge Authorisation Application Form

#### **Tracking Amendments to Draft Application Form**

Version No.	Date	Amendment since previous version	Reason	
V. 1.	11/10/07	N/A		
V. 2.	18/10/07	Inclusion of a Note 1 superscript for Orthophosphate in Tables D.1(i)(b) & D.1(ii)(b).	To highlight the requirement for filtered samples in measurement of O-Phosphate for waste water discharges.	
V.3.	13/11/07	Amend wording of Section F.2 to include 'abstraction'.	To accurately reflect the information required	
		Amend wording of Checklist in Annex to reflect wording of Regulation 16(5) of S.I. No. 684 of 2007.	To accurately reflect the Regulations and to obtain the application documentation in appropriate format.	
		Inclusion of unique point code for each point of discharge and storm water overflow.	Totald in cross-referencing application documentation.	
V.4	18/04/08	Inclusion of requirement to provide name of agglomeration to which the application relates.	To accurately determine the agglomeration to be licensed.	
		Amend wording of Section B.7. (iii) to reflect the title of Water Services Authority.	To accurately reflect the Water Services Act, 2007.	
		Addition of new Section B.9 (ii) in order to obtain information on developments yet to contribute to the waste	To obtain accurate population equivalent figures for the agglomeration.	
		water works.  Addition of sub-sections C.1.1 & C.1.2 in order to clarify information required for Storm water overflow and pumping stations	To obtain accurate information on design and spill frequency from these structures.	
		within the works.  Amend Section D.1 to include a requirement for monitoring data for influent to waste water treatment plants, where available.  Amend wording of Section E.1 to request information	To acquire information on the population loading onto the plant and to provide information on performance rates within the plant.  To acquire accurate information on the sampling and monitoring	



## Waste Water Discharge Authorisation Application Form

		on composite sampling/flow monitoring provisions.	provisions for discharges from the works.
V.5	07/07/2008	Amend wording of B.7 (iii) to include reference to Water Services Authorities.  Amend Section G.1 to include Shellfish Waters	To accurately reflect the Water Services Act, 2007 requirements.
V.6	26/08/2008	Directive.  Amendments to Section D to reflect new web based reporting.	To clarify the reporting requirements.
		Amended requirements for reporting on discharges under E.1 Waste Water Discharge Frequency and Quantities.	To streamline reporting requirements.
		Amendment to Section F.1 to specify the type of monitoring and reporting required for the background environment.	requirements for ambient
		Removal of Annexes 100 application form.	To reflect the new web based reporting requirements.
		monitoring and reporting required for the background environment.  Removal of Annexes of application form.  Removal form.  Removal of Annexes of the application form.  Removal of Annexes of the application form.  Removal of Annexes of the application form.	





#### **Environmental Protection Agency** Application for a Waste Water Discharge Licence Waste Water Discharge (Authorisation) Regulations 2007.

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**ANNEX 1: TABLES/ATTACHMENTS** 

**ANNEX 2: CHECKLIST** 

#### Waste Water Discharge Authorisation Application Form

#### **ABOUT THIS APPLICATION FORM**

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

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

A valid application for a Waste Water Discharge Licence must contain the information prescribed in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). Regulation 16 of the Regulations sets out the statutory requirements for information to accompany a licence 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 in respect of Regulation 16 requirements, please complete the Regulation 16 Checkest provided in Annex 2.

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 datability 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 licences, and for the processing of reviews of such licences, appear 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.

Prior to submitting an application the applicant must publish (within the two weeks prior to date of application) in a newspaper circulating in the area, and erect at the point nearest to the waste water treatment plant concerned or, if no such plant exists, at a location nearest the primary discharge point, a notice of intention to apply. An applicant, not being the local authority in whose functional area the relevant waste water discharge, or discharges, to which the relevant application relates, takes place or is to take place, must also notify the relevant Local Authority, in writing, of their intention to apply.

An application for a licence must be submitted on the appropriate form (available from the Agency) 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 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 licence is an offence under the Waste Water Discharge (Authorisation) Regulations, 2007.

The provision of information in an application for a waste water discharge licence 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: <u>Drawings</u>. The following guidelines are included to assist applicants:

- All drawings submitted should be titled and dated.
- All drawings should have a <u>unique reference number</u> 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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Page 8 of 40

#### 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 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 Nº A.1

#### Non-Technical Summary

Drimoleague is located on the R568 regional route joining Dunmanway and Bantry and is 12km south west of Dunmanway town. The village commands a large rural hinterland, which is characterised by rolling marginal landscapes with a mixture of rocky ridges and knolls, low to moderate fertility and small scattered settlements.

The village is linear in structure, concentrated along the main roads to Dunmanway to the east, Bantry to the west and Skibbereen to the south and is the service centre to the rural hinterland.

#### Wastewater Works and the Activities Carried out Therein

#### **Existing Collection System**

There is a relatively extensive collection system on the village. The older central part is served by a partially combined system with the more recent peripheral developments on separate foul and storm networks. The entire collection network flows by gravity to the plant.

#### **Existing Treatment Plant**

The collection system flows by gravity to a treatment plant on the Skibbereen road approx 800m south west of the village centre. The plant is a proprietary circular compact oxidation ditch, incorporating a settling tank, installed in the late 1980's

with a 500p.e. design capacity. The plant includes a manually raked inlet screen and sludge storage tank.

#### **Existing Outfall**

The plant discharges to the adjacent River Ruagagh, which joins the Ilen River approx 3km downstream.

#### Stormwater Overflow

There is a stormwater overflow pipe leading to the river from the manual raked inlet screen chamber. From local knowledge the overflow pipe has only operated on the very rare occasion and no overflows have occurred recently. The only time that this overflow pipe would operate is if the pipe leading from the inlet screen to the oxidation ditch got blocked. The invert level of this overflow pipe is at such a high level, in comparison to the invert level of the inlet pipe to the oxidation ditch that even at instances of very heavy rain the overflow would not be used.

#### Sources of Emissions from the Wastewater works

The main sources of wastewater are domestic properties in the catchment area. The town would have a number of commercial properties but none that would be considered industrial in terms of effluent discharge. The current population of Drimoleague agglomeration being served by the sewerage scheme is estimated at 635 pe, this is based on a design report carried out by White Young Green Consulting Engineers in 2007.

#### Nature and Quantities of Foreseeable Emissions from the Wastewater Works into the receiving Aqueous Environment as well as Identification of Significant Effects of the Emissions on the Environment

The sources of emissions from Drimoleague are considered domestic. There are a small number of commercial premises in the town but all would be considered domestic in terms of wastewater.

The existing outfall discharges effluent to the River Ruagagh, a tributary of the River Ilen adjacent to the Waste Water Treatment Plant. The outfall is via 4" dia DI pipe. The effluent under-goes secondary treatment prior to being discharged to the River. That section of the River Ruagagh is not designated as a Natural Heritage Area, a Special Area of Conservation, a Proposed Natural Heritage Area or a Special Protected Area.

## Proposed Technology and Other Techniques for preventing or where this is not possible reducing emissions from the Wastewater Works

The wastewater treatment plant has a design pe of 500pe. It is hoped that the plant would be upgraded to accommodate the projected increase in population in the future. In the short term the plant is being thoroughly maintained and de-sludged on a regular basis to assist the efficient running of the plant as it currently stands. It is also proposed to install a mechanical screen at the inlet works to aid in the proper operation of the plant.

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

The effluent from the treatment plant is sampled on a regular basic by Cork County Council. Also the river Ruagagh is sampled upstream and downstream of the plant so as to monitor the quality of the river and the effect of the treatment plant has on the environment. A full time Caretaker is employed to ensure the proper operation of the plant and Cork County Council is therefore in a position to avoid significant pollution of the river due to the wastewater treatment plant.

Drimoleague Waste Water Treatment Plant has been included in the Assessment of Needs 2006 and it is proposed to improve treatment at a cost of  $\[ \in \]$ 0.7 million. The assessments are used as an input to the National Development Plan that will cover the period 2007 – 2013 and to optimise project selection in future phases of the Water Services Investment Programme.

#### Measures Planned to monitor emissions into the environment

The emissions from the existing treatment plant can be monitored through the sampling point SW01 Drim (see Map Drim B3–01 for location).



#### **SECTION B: GENERAL**

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

#### **B.1** Agglomeration Details

Name of Agglomeration: Drimoleague

#### **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 licence application relates. It should have the boundary of the agglomeration to which the licence application relates <u>clearly marked in red ink</u>.

Name*:	Cork County Council
Address:	Water Services (Western Division)
	Courthouse
	Skibbereen Me Skibbereen
	Co Cork
Tel:	028 21299 <sub>25</sub> (v)
Fax:	028 21995 <u>Rojie</u> s
e-mail:	declan.groarke@corkcocolie

<sup>\*</sup>This should be the name of the water services athority in whose ownership or control the waste water works is vested.

<sup>\*</sup>Where an application is being submitted by the half of more than one water services authority the details provided in Section B.1 shall be that of the lead water services authority.

Name*:	Declan Groarke
Address:	Cork County & uncil
	Courthouse
	Skibbereen
	Co Cork
Tel:	028 21299
Fax:	028 21995
e-mail:	declan.groarke@corkcoco.ie

<sup>\*</sup>This should be the name of person nominated by the water services authority for the purposes of the application.

#### **Co-Applicant's Details**

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

<sup>\*</sup>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 (authorisation) licence application.

#### **Design, Build & Operate Contractor Details**

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

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

Attachment included	Yes	No
	<b>√</b>	

#### **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 existed with the waste water works, if such a plant or plants existed with the waste water works, if such a plant or plants existed with the waste water works, if such a plant or plants existed with the waste water works, if such a plant or plants existed with the waste water works, if such a plant or plants existed with the waste water works, if such a plant or plants existed with the waste water works.

Name*:	Ruth O'Brien
Address:	Area Engineers Office
	The Square
	Bantry
	Çő. Cork
Grid ref (6E, 6N)	℃112677E, 045277N
<b>Level of Treatment</b>	Secondary
<b>Primary Telephone:</b>	027 50058
Fax:	027 51165
e-mail:	ruth.obrien@corkcoco.ie

<sup>\*</sup>This should be the name of the person responsible for the supervision of the waste water treatment plant.

**Attachment B.2** should contain appropriately scaled drawings / maps (≤A3) of the site boundary and overall site plan, including labelled discharge, monitoring and sampling points. These drawings / maps should also be provided as georeferenced 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
	1	

<sup>\*</sup>Where a design, build & operate contract is in place for the waste water works, or any part thereof, the details of the contractor should be provided.

#### **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.

Type of Discharge	Open 4" Ductile Iron Pipe
<b>Unique Point Code</b>	SW01
Location	Garranes South
Grid ref (6E, 6N)	112681E, 045309N

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

Attachment included	Yes	No
	1	

## B.4 Location of Secondary Discharge Point(s)

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

	io s	
Type of Discharge	Not Applicable	
<b>Unique Point Code</b>	at it ight	
Location	to St.	
Grid ref (6E, 6N)	3.05	

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

Attachment included	Yes	No
		1

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

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

Type of Discharge	6" concrete pipe
<b>Unique Point Code</b>	SW02 DRIM
Location	Garranes South
Grid ref (6E, 6N)	112678E, 045315N

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

Attachment included	Yes	No
	1	

#### **B.6 Planning Authority**

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

Name:	Cork County Council
Address:	Norton House
	Skibbereen
	Co Cork
Tel:	028 40340
Fax:	028 21660 diff
e-mail:	oully, any

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

has been obtained	instit	is being processed	
is not yet applied for	FORTYTIE	is not required	
	CO**		

<u>-</u>	
Local Authority Planning File Reference Nº:	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.

Attachment included	Yes	No
		V

#### **B.7** Other Authorities

B.7 (i) Shannon Free Airport Development Company (SFADCo.) area

The applicant should tick the appropriate box below to identify whether the discharge or discharges are located within the Shannon Free Airport Development Company (SFADCo.) area.

**Attachment B.7(i)** should contain details of any or all discharges located within the SFADCo. area.

Within the SFADCo Area	Yes	No
		1

#### B.7 (ii) Health Services Executive Region

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

Name:	Health Service Executive
Address:	Hospital Grounds
	Skibbereen
	Co Cork
Tel:	028 40400
Fax:	028 21006
e-mail:	

#### B.7 (iii) Other Relevant Water Services Authorities

Regulation 13 of the Waste Water Discharge (Authority in Regulations, 2007 requires all applicants, not being the water services authority in whose functional area the relevant waste water discharge or stissmarges, to which the relevant application relates, takes place or is to take place, to notify the relevant water services authority of the said application.

Name:	Not Applicable	
Address:	itis dit o	
Tel:	Forther	
Fax:	& COY	
e-mail:	att	

Cons		
Relevant Authority Notified	Yes	No
		1

**Attachment B.7(iii)** should contain a copy of the notice issued to the relevant local authority.

Attachment included	Yes	No
		1

#### **B.8** Notices and Advertisements

Regulations 10 and 11 of the Waste Water Discharge (Authorisation) Regulations, 2007 require all applicants to advertise the application in a newspaper (within two weeks prior to date of application) and by way of a site notice. See *Guidance Note*,

**Attachment B.8** should contain a copy of the site notice and an appropriately scaled drawing (≤A3) showing its location. **The original application must include the original page of the newspaper in which the advertisement** 

was placed. The relevant page of the newspaper containing the advertisement should be included with the original and one (1) copy of the application.

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

#### **B.9 (i)** Population Equivalent of Agglomeration

#### TABLE B.9.1 POPULATION EQUIVALENT OF AGGLOMERATION

The population equivalent (p.e.) of the agglomeration to be, or being, served by the waste water works should be provided and the period in which the population equivalent data was compiled should be indicated.

Population Equivalent	635
Data Compiled (Year)	2007
Method	Design Report by White Young Green

Taking the pending developments in B9(ii) below into consideration and also the fact that development will probably be restricted to lands that have been zoned within the development boundary, the predicted pe for 2015 would be approx 990.

#### **B.9 (ii)** Pending Development

Where planning permission has been grapted 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 weste water works to accommodate this extra hydraulic and organic loading without posing an environmental risk to the receiving water habitat.

A review of recent planning applications indicated that there are 72 houses (72\*3=216pe) which have been granted planning permission but have not yet been constructed. These developments are to be constructed on a phased basis. 38 of the 72 houses can be constructed immediately and the remaining 34 can be constructed once the Drimoleague Water Supply Scheme is upgraded.

#### B.9 (iii) FEES

State the relevant Class of waste water discharge as per Column 1 of the Second Schedule, and the appropriate fee as per Columns 2 or 3 of the Third Schedule of the Waste Water Discharges (Authorisation) Regulations 2007, S.I. No. 684 of 2007.

Class of waste water discharge	Fee (in €)
500-1000 pe	€10,000

Appropriate Fee Included	Yes	No
	1	

#### **B.10 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), allocated to the capital project. Provide details on the extent and type of work to be undertaken and the likely timeframes for this work to be completed.

The most recent national Water Services Investment Programme does not include Drimoleague Sewerage Scheme on its list.

However it has been included on the Assessment of Needs. These assessments are input to the National Development Plan that will cover the period 2007 – 2013 and to optimise project selection in future phases of the Water Services Investment Programme. Under the proposal in the Assessment of Needs it planned to upgrade effluent treatment to comply with Urban Wastewater Directive and improve water quality in River Ilen.

**Attachment B.10** 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	cition to teeth	Yes	No
	citis dinto and		1

#### **B.11 Significant Correspondence**

Provide a summary of anticoncorrespondence 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.11** should contain a summary of any relevant correspondence issued in relation to a Section 63 notice.

Attachment included	Yes	No
		V

#### **B.12** 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.12** should contain the most recent licence issued under the Forsehore 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
		√

Consent of copyright owner required for any other use.

#### **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.

#### **Existing Collection System**

There is a relatively extensive collection system in the village. The older central part is served by a partially combined system with the more recent peripheral developments on separate foul and storm networks. The entire collection network flows by gravity to the plant. The river runs parallel to the main street in the town and the surface water from the front of the buildings and the road enters the river at intervals.

#### **Existing Treatment Plant**

The collection system flows by gravity to a treatment plant on the Skibbereen road approx 800m south west of the village centre. The plant is a proprietary circular compact oxidation ditch installed in the late 1986 swith a 500p.e. design capacity. The plant includes a manually raked inlet screen and sludge storage tank.

#### **Existing Outfall**

Existing Outfall

The plant discharges to the adjacent River Ruagagh, which joins the Ilen River approx 3km downstream.

#### **Process**

The effluent flows by gravity from the town to the treatment plant where it first passes a manual racked inlet screen. The effluent then flows into the plant which is based on the oxidation ditch principles and loadings with the circular aeration compartment surrounding the settlement compartment which consists of a 60° central hopper.

The cage rotor supplies oxygen to the mixed liquor and also ensures mixing and circulation of the mixed liquor. The aeration tank acts as a reservoir and holds the bacteria which feed on the raw sewage. The ditch outlet weir is used for varying the depth of immersion of the rotor and allows transfer from aeration tank to settlement tank.

The final settlement compartment is used to separate the sludge from the final effluent. The settlement compartment contains a 60° central hopper and is spanned by a fixed bridge complete with handrailing. The sludge is directed to the bottom of the hopper where it is returned to the aeration compartment or excess sludge tank by submersible sludge pump. The final effluent is taken off by means of a peripheral "V" notch weir.

There is a return pipe from the sludge tank to the aeration compartment which returns any clear water from the top of the tank. The sludge is allowed to settle to the bottom of the tank which is de-sludged every 3 months and taken off site for appropriate treatment.

#### 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 sewerage scheme in Drimoleague only has 1 stormwater overflow within the scheme. This is located at the treatment plant site at the inlet screen and was installed prior to publication of the DoEHLG "Procedures and Criteria in Relation to Storm Water Overflows". The overflow pipe leads from the inlet screen to the River adjacent to the Primary Discharge Point. The overflow pipe is situated too high and would need some alterations to allow between 3 to 6 DWF into the plant. As such, the overflow pipe is not used unless there is a blockage in the pipe leading from the inlet screen to the oxidation ditch and this, to our best knowledge has not happened in recent times.

#### C.1.2 Pumping Stations

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

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

The collection system in Drimoleague is a gravity sewer and does not have any pumping stations within the scheme.

**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
	1	

#### C.2 Outfall Design and Construction

Provide details on the primary discharge point & secondary discharge points and storm overflows to include reference, location, design criteria and construction detail.

#### Discharge Points in Drimoleague Sewage Scheme

Discharge	Reference	Location	Design Criteria	Construction Details
Primary	SW01 Drim	112681E,	100mm Ductile	Discharge pipe
		045309N	Iron Pipe	to river
Storm Water	SW02 Drim	112678E,	225mm Concrete	Overflow pipe
Overflow		045315N	Pipe	to river

**Attachment C.2** should contain any supporting documentation on the design and construction of <u>any and all</u> discharge outfalls, including stormwater overflows, from the waste water works.

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Attachment included	oses altor	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 emissions 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: <a href="http://78.137.160.73/epa\_wwd\_licensing/">http://78.137.160.73/epa\_wwd\_licensing/</a>. The applicant should address in particular all discharge points where the substances outlined in Tables D.1(i), (b) & (c) and D.1(ii), (b) & (c) of Annex 1 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 Discharges to Surface Waters

Details of all discharges of waste water from the agglomeration should be supplied via the waste water from the agglomeration should be supplied via the web based link: <a href="http://78.137.160.73/epa wwd licensing/">http://78.137.160.73/epa wwd licensing/</a>. Tables D.1(i)(a), (b) & (c), should be completed for the primary discharge point from the agglomeration and Tables D.1(ii)(a), (b) & (c) should be completed for each secondary discharge point, where relevant. Table D.1(iii)(a) 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 plant this data should also be provided in response to Section D.1.

Supporting information should form **Attachment D.1** 

Attachment included	Yes	No
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#### **D.2** Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

Table D.2:

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING
Point Code Provide label ID's	Point Type (e.g., Primary/ Secondary/ Storm Water Overflow)	Local Authority Name (e.g., Donegal County Council)	Receiving Water Body Type (e.g., River, Lake, Groundwater, Transitional, Coastal)	Receiving Water Body Name (e.g., River Suir)	Protected Area Type (e.g., SAC, candidate SAC, NHA, SPA etc.)	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference
SW01 Drim	Primary	Cork County Council	River	River Ruagagh	None	112681E	045309N
SW02 Drim	Storm water Overflow	Cork County Council	River	River Ruagagh	None	112678E	045315N

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

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#### SECTION E: MONITORING

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

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

Provide an estimation of the quantity of waste water likely to be emitted in relation to all primary and secondary discharge points applied for. This information should be included in Table E.1(i) via the following web based link: <a href="http://78.137.160.73/epa\_wwd\_licensing/">http://78.137.160.73/epa\_wwd\_licensing/</a>.

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 E.1(ii) via the following web based link: <a href="http://78.137.160.73/epa\_wwd\_licensing/">http://78.137.160.73/epa\_wwd\_licensing/</a>.

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 meters.

#### 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 on order to ensure accurate and reliable monitoring.

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

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

Attachment included	Yes	No	
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#### E.3. Tabular data on Monitoring and Sampling Points

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

PT_CD PT_TYPE		MON_TYPE	EASTING	NORTHING	VERIFIED
Point Code Provide label ID's assigned in section E of application	(e.g., Primary, Secondary,	Monitoring Type M = Monitoring S = Sampling		6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
aSW-1u	Primary -	S	112653	045904	N
	Upstream				
aSW-1d	Primary -	S	112893	044863	N
	Downstream				
SW-01	Primary -	S	112677	045303	N
	Discharge		oil	<b>Ο</b> *	

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

#### **E.4** Sampling Data

Regulation 16(1)(h) of the Waste Water Discharge (Authorisation) Regulations 2007 requires all applicants in the case of an existing waste water treatment plant 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 16(1)(I) of the regulations requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

**Attachment E.4** should contain any supporting information.

Attachment included	Ye	es	No	
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## SECTION F: EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)

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

Detailed 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).

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. Assessment of Impact on Receiving Surface or Ground Water

o Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

According to the SWRBD risk assessment the River Ruagagh has a 1a – At risk status. There are no Q values available for the River Ruagagh.

- o Details of all monitoring of the receiving water should be supplied via the following web based link: <a href="http://s/8.137.160.73/epa\_wwd\_licensing/">http://s/8.137.160.73/epa\_wwd\_licensing/</a>. Tables F.1(i)(a) & (b) 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 F.1(i)(a) & (b). Monitoring of surface water shall be carried out at not less than two points, one upstream from the discharge location and one downstream.
- For discharges from secondary discharge points Tables F.1(ii)(a) & (b) should be completed. Furthermore, provide summary details and an assessment of the impacts of any existing or proposed emissions on the surface water or ground (aquifers, soils, sub-soils and rock environment), including any impact on environmental media other than those into which the emissions are to be made.

Not applicable. There are no secondary discharge points associated with Drimoleague Sewage Scheme.

Provide details of the extent and type of ground emissions at the works. For larger discharges to groundwaters, e.g., from Integrated Constructed Wetlands, large scale percolation areas, etc., a comprehensive report must be completed which should include, inter alia, topography, meteorological data, water quality, geology, hydrology, and hydrogeology. The latter must in particular present the aquifer classification and vulnerability. The Geological Survey of Ireland Groundwater Protection Scheme Dept of the Environment and Local Government, Geological Survey of Ireland, EPA (1999) methodology

should be used for any such classification. This report should also identify all surface water bodies and water wells that may be at risk as a result of the ground discharge.

Not applicable. There are no ground emissions associated with Drimoleague Sewage Scheme.

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

The River Ruagagh, a tributary of the River Ilen is contained within Hydrometric Area No. 20 and is located entirely in Cork County. The River Ruagagh rises approx 5km north east of Drimoleague and generally flows in a south westerly direction where it joins the River Ilen approx 3km from the town.

Virtually the entire Ilen catchment lies in the Bantry limestone basin. The Ilen River rises north of Drimoleague in the foothills of Mullaghamesha and flows in a south-southwesterly direction to discharge to the sea through Skibbereen and Baltimore Harbour.

There are 13 EPA monitoring sites on the Ilen system which all recorded satisfactory water quality in 1997, 2000 and 2003. There is no recent water quality management plan or catchment management plan in place for the River Ilen.

The discharge from the Wastewater treatment plant in Drimoleague is not within any designated sensitive area under the Orban Wastewater Treatment Regulations 2001. Nor is it located within a European designated site.

The River Ruagagh and River Ilen are not designated Shellfish areas under the Shellfish Waters Regulations, S.I.200 of 1994. However, Roaringwater Bay, into which the River Ilen ultimately flows is designated under these regulations. The River Ilen is not designated a Salmonid Water under Salmonid Water Regulations, S.I. 293 of 1988. However, it is considered to be an important fishery.

#### Assimilative Capacity of the Receiving Water

#### a) Mass Balance Equation for Orthophosphate

Median flow of River = 0.49016 m<sup>3</sup>/sec Median oPO<sub>4</sub>-P in River (upstream) = 0.05mg/l

Average volume of Discharge = 0.008 m<sup>3</sup>/sec Median value of oPO<sub>4</sub>-P in discharge = 0.82mg/l

$$C_{\text{final}} = \frac{(0.49016 \times 0.05) + (0.008 \times 0.82)}{0.49016 + 0.008}$$

$$C_{final} = 0.0624 \text{ mg/l oPO}_4\text{-P}$$

The increase in Orthophosphate due to the discharge of Drimoleague WWTP is  $12.4\mu g/l$ 

#### b) Mass Balance Equation for BOD

Flow of River (95%) =  $0.08158 \text{ m}^3/\text{sec}$ Average BOD in River (upstream) = 1 mg/l

Average volume of Discharge = 0.008 m<sup>3</sup>/sec Average BOD in Discharge = 46.5 mg/l<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub>2</sub>0<sup>3</sup>/<sub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$$C_{\text{final}} = \frac{(0.08158 \times 1) + (0.0081 \times 46.5)}{0.08158 \times 0.008}$$

$$C_{\text{final}} = 5.13 \text{ mg/l BOD}$$

The increase in BOD due to the discharge of Drimoleague WWTP is 4.13mg/l.

#### c) Mass Balance Equation for Suspended Solids

Flow of River  $(95\%) = 0.08158 \text{ m}^3/\text{sec}$ Average SS in River (upstream) = 7mg/l

Average volume of Discharge = 0.008 m<sup>3</sup>/sec Average SS in Discharge = 35.25 mg/l

$$C_{\text{final}} = \frac{(0.08158 \text{ x 7}) + (0.008 \text{ x 35.25})}{0.08158 + 0.008}$$

$$C_{final} = 9.52 \text{ mg/l SS}$$

The increase in SS due to the discharge of Drimoleague WWTP is 2.52mg/l.

#### d) Mass Balance Equation Total Phosphate

50% Median flow of River =  $0.2451 \text{ m}^3/\text{sec}$ Median TP in River (upstream) = 0.02mg/l

Average volume of Discharge =  $0.008 \text{ m}^3/\text{sec}$ Median value of TP in discharge = 2.75 mg/l

$$C_{\text{final}} = \frac{(0.2451 \text{ x } 0.02) + (0.008 \text{ x } 2.75)}{0.2451 + 0.008}$$

$$C_{final} = 0.106 \text{ mg/l TP}$$

The increase in Total Phosphate due to the discharge of Drimoleague WWTP is  $86\mu g/l$ .

#### e) Mass Balance Equation for Total Nitrogen

Flow of River (95%) =  $0.08158 \text{ m}^3/\text{sec}$ Average Total Nitrogen in River (upstream) = 2.5 mg/l

Average volume of Discharge = 0.008 m<sup>3</sup>/sec Average Total Nitrogen in Discharge = 17.775 mg/l

$$C_{\text{final}} = \frac{(0.08158 \times 2.5) + (0.008 \times 17.775)}{0.08158 + 0.008}$$

$$C_{final} = 3.864 \text{ mg/l Total Nitrogen}$$

The increase in Total Nitrogen due to the discharge of Drimoleague WWTP is 1.364mg/l.

#### f) Mass Balance Equation for Sulphate

Flow of River (95%) = 0.08158 m<sup>3</sup>/sec Average Sulphate in River (upstream) = 30mg/l

Average volume of Discharge = 0.008 m<sup>3</sup>/sec Average Sulphate in Discharge = 30mg/l

$$C_{\text{final}} = \frac{(0.08158 \times 30) + (0.008 \times 30)}{0.08158 + 0.008}$$

$$C_{final} = 30 \text{ mg/l Sulphate}$$

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

#### g) Mass Balance Equation for Ammonia - N

Flow of River  $(95\%) = 0.08158 \text{ m}^3/\text{sec}$ Average Ammonia-N in River (upstream) = 0.1 mg/l

Average volume of Discharge = 0.008 m<sup>3</sup>/sec Average Ammonia-N in Discharge = 7.6mg/l

$$C_{\text{final}} = \frac{(0.08158 \text{ x 1}) + (0.008 \text{ x 7.6})}{0.08158 + 0.008}$$

$$C_{final} = 1.589 \text{ mg/l Ammonia-N}$$

The increase in Ammonia-N due to the discharge of Drimoleague WWTP is 1.489mg/l.

It should be noted that all actual downstream results shown on table E4 are less than the theoretical results as calculated in the above equations.

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

Cork County Council has monitored for the main polluting substances as defined in the Dangerous Substances Regulations S.J. No. 12 of 2001. The results are presented in Table D and F. As can be seen from the results of the substances tested the emissions from the wastewater treatment plant are not likely to impair the environment.

In circumstances where water abstraction points exist downstream 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.

Water is abstracted downstream of the WWTP at Ballyhilty Bridge, Skibbereen for the Skibbereen Regional Water Supply Scheme. The location of the abstraction point is approximately 13km downstream of the WWTP outfall. The grid reference is 111760E, 36350N. The volume abstracted per day is approximately 2500m<sup>3</sup>/day.

Specific measures are not taken to ensure that discharges for the wastewater works will not have a significant effect on faecal coliforms, salmonella and protozoan pathogen numbers. However Cork County Council's WWTP at Drimoleague treats wastewater from the Drimoleague catchment to a secondary standard in order to minimise the amounts of these microbes.

River water quality in the Ilen River is constantly being monitored at the intake point for the Skibbereen Regional Water Supply Scheme at Ballyhilty Bridge by Cork County Council. The risk assessment and catchment area for the Skibbereen Water Scheme are presented in Attachment F2.

- 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 conservations within the meaning of the Natural Habitats Regulations, or purguit
  - (d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EFC 2015

<sup>1</sup>Council Directive 92/43 EEC of 21 May 1992 on the conservation of natural habitate 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)

The discharge point from the WWTP is not located within a European designated site and consequently these directives do not apply.

 Describe, where appropriate, measures for minimising pollution over long distances or in the territory of other states.

#### Not applicable

 This section should also contain full details of any modelling of discharges from the agglomeration. Full details of the assessment and any other relevant information on the receiving environment should be submitted as Attachment F.1.

No modelling is available for the discharge from the WWTP

Attachment included	Yes	No	
		V	

#### 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 m³/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
	Skibbereen & environs	2500	SW01	13000	111760	036350	N

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

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

Attachment F.2 should contain any supporting information.

#### **SECTION G:** PROGRAMMES OF IMPROVEMENTS

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

#### **G.1 Compliance with Council Directives**

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

- Dangerous Substances Directive 2006/11/EC,
- Water Framework Directive 2000/60/EC,
- Birds Directive 79/409/EEC,
- Groundwater Directives 80/68/EEC & 2006/118/EC,
- Drinking Water Directives 80/778/EEC,
- Urban Waste Water Treatment Directive 91/271/EEC,
- Habitats Directive 92/43/EEC,
- Environmental Liabilities Directive 2004/35/EC,
- Bathing Water Directive 76/160/EEC, and
- Shellfish Waters Directive (79/923/EEC).

Dangerous Substances Directive 2006/11/EC
The parameters listed in the Dangerous Substances Office and the inlet a The parameters listed in the Dangerous Substances Directive 2006/11/EC have been tested at the inlet and outlet of the plant and river samples taken upstream and downstream of the discharge point. As can be seen from these results all parameters are compliant with the regulations. Copper at 332ug/l and Boron at 51ug/l were recorded at the inlet of the plant, but the outlet samples record show <20ug/l value for both parameters which is within the allowable values.

#### Water Framework Directive 2000/60/EC

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

Under the SWRBD risk assessment the River Ruagagh is considered to be at Risk. The proposal to upgrade under assessment of needs will improve water quality in order to comply with the aims of the WFD of achieving compliance by 2015.

#### Birds Directive 79/409/EEC

The discharge point from the wastewater treatment plant is not within any European Natura 2000 protected site.

#### Groundwater Directives 80/68/EEC & 2006/118/EC,

There are no discharges to groundwater and there are no large public groundwater sources in the area. In addition there are no regionally important aquifers. However many rural dwellings are known to depend on boreholes drawing groundwater from locally important or poor aquifers.

#### Drinking Water Directives 80/778/EEC,

Water is abstracted from the River Ilen for treatment at Skibbereen Regional Water Supply Scheme, the abstraction point is located 13km downstream of the WWTP discharge point. The proposal to upgrade the WWTP under the Assessment of Needs will improve water quality in order to comply with the aims of the Drinking Water Directive. Information relating to water abstraction can be found in Attachment F2.

#### **Urban Waste Water Treatment Directive 91/271/EEC**,

As stated in the S.I. No. 254 of 2001, Urban Waste Water Treatment Regulation, 2001: "A sanitary authority shall ensure by 31 December 2005 that urban waste water entering a collection system shall before discharge be subject to appropriate treatment in the following cases:

- (a) in respect of discharge to freshwater and estuaries from agglomerations with a population equivalent of less than 2,000.
- (b) in respect of discharges to coastal waters from agglomerations with a population equivalent of less than 10000.

The treated effluent quality standard for the Drimoleague Waste Water Treatment Plant is to comply with the E.U. Urban Waste Water Treatment Directive Standards which are as follows:

BOD
COD
Total Suspended Solids

25mg/l
125mg/l
35mg/l

The proposal to upgrade the WWTP under the Assessment of Needs will improve waste water quality in order to achieve compliance with these standards.

#### Habitats Directive 92/43/EEC,

None of the habitats around the Wastewater Treatment Plant are rare or of special ecological interest. In particular, there are no Areas of Scientific Interest in the immediate vicinity and no rare or protected plants on the site. Although not designated under the Quality of Salmonid Waters Regulations, the River Ilen is a good quality waterway and an important local fishery. The EPA has rated the water quality of the Ilen River as Q4. Therefore the water is relatively unpolluted with a high level of biodiversity.

#### Environmental Liabilities Directive 2004/35/EC,

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

Cork County Council wastewater laboratory carries out monitoring of the effluent from the wastewater treatment plant on a regular basis.

At present Drimoleague WWTP is maintained by a full time Cork County Council Caretaker and the sludge tank is de-sludged regularly to prevent environmental damage. The scheme has also been included in the Assessment of Needs 2006 and it is proposed to improve treatment thus further reducing the possibility of environmental damage.

### Bathing Water Directive 76/160/EEC,

The River Ruagagh and the River Ilen are not designated as a 'Bathing Water' under the Bathing Water (SI No. 79 of 2008) Regulations.

### Shellfish Waters Directive (79/923/EEC).

The River Ruagagh and the River Ilen are not designated Shellfish Areas under the Shellfish Waters Regulations, S.I. 200 of 1994. However, Roaringwater Bay is designated under these regulations. There are a number of licensed shellfish areas within the Ilen Estuary. Based on discussions with Bord Iascaigh Mhara the most upstream of these is west of Ringarogy Island.

\*\*\*\*\*\*\*

Drimoleague Waste Water Treatment Plant has been included in the Assessment of Needs 2006 and it is proposed to improve treatment at a cost of €0.7 million. The assessments are used as an input to the National Development Plan that will cover the period 2007 – 2013 and to optimise project selection in future phases of the Water Services Investment Programme.

**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
		1

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

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

### Receiving Water Quality Requirement based on Phosphorus Regulations 2008.

The effluent arising from the WWTP is discharged to the River Ruagagh, which flows adjacent to the WWTP site boundary. The River Ruagagh is a tributary of the River Ilen.

The EPA has6 number stations on the River Ilen but none on the River Ruagagh. There are 4 stations downstream of the discharge point and 2 stations which are part of the Ilen but which do not flow through Drimoleague or its discharge point from the WWTP. Of the 4 stations downstream of the WWPT a 4 Q value is averaged at each of the stations.

### **Effluent Standards**

The treated effluent quality requirements are determined with respect to the EC Urban Wastewater Directive, given effect in Irish Law by SI 254 of 2001. The wastewater treatment processes should reduce nutrients in the final effluent. The minimum effluent standard based in SI 254 of 2001 for Phosphorus in wastewater effluent is 2mg/l.

As a natural consequence of secondary treatment, there will be an uptake of phosphorus for biomass synthesis at the wastewater treatment plant in Drimoleague. As can be seen from the upstream and downstream results in Table E4 the Total P is <0.02mg/l and O-PO4-P is <0.05mg/l, which is within the regulations.

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

Attachment included	COLIFE	Yes	No
ent	<b>&gt;</b>		V

### **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.

Drimoleague Waste Water Treatment Plant has been included in the Assessment of Needs 2006 and it is proposed to improve treatment at a cost of €0.7 million. The assessments are used as an input to the National Development Plan that will cover the period 2007 – 2013 and to optimise project selection in future phases of the Water Services Investment Programme.

**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
		1

### **G.4** Storm Water Overflow

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.

The storm water overflow, located at the inlet screen, is rarely utilised. The invert level of the overflow pipe is located too high in relation to the invert level of the inlet pipe to the oxidation ditch. This stormwater overflow pipe should be lowered to allow 3 to 6 times DWF flow into the plant. If during the course of the improvement works planned in the Assessment of Needs it is found necessary to recommission this overflow it will be designed in accordance with the DoEHLG "Procedures and Criteria in relation to Storm Water Overflows 1995".

**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
		1
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### SECTION H: DECLARATION

### **Declaration**

I hereby make application for a waste water discharge licence/revised licence, 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)

Print signature name:

NAME OF THE NAME OF THE POSITION OF THE POS

### SECTION I: JOINT DECLARATION

### Joint Declaration Note1

I hereby make application for a waste water discharge licence/revised licence, 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	Neg.
Signed by :	d <sup>ffet</sup> Date :
(on behalf of the organisation)	्र विभिन्न सम्ब
Print signature name:	pat post ited
Position in organisation:	ger in the contract of the con
+00 11 to	
Co-Applicants	
Signed by:	Date :
(on behalf of the organisation)	
Signed by: (on behalf of the organisation)  Print signature name:  Position in organisation:  Co-Applicants  Signed by: (on behalf of the organisation)  Print signature name:  Position in organisation:	
Position in organisation:	
Signed by :	Date :
Signed by :	
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.

### **Table of Contents of Annex 1**

### **ATTACHMENTS**

Section A – Non Technical Summary

Attachment A1 - Drim A1-01 - Site Location Map of Agglomeration

Section B - General

Attachment B1 - Drim B1-01- Agglomeration Boundary Map

Attachment B2 - Drim B2-01 – Site Location Map of Wastewater Treatment Plant

Attachment B3 - Drim B3-01 – Primary Discharge Point

Attachment B5 - Drim B5-01 - Stormwater Overflow Point

Attachment B8 - Drim B8-01 – Site Notice Locations

- Site Notice

- Newspaper Advertisement

Attachment B9(iii) - Application Fee

Section C – Infrastructure & Operation

Attachment C1 - Drim C1-01 Process Flow Diagram

Section E - Monitoring

Attachment E2 – Monitoring Programme

Attachment E4 – Sampling Data

Section F – Existing Environment and Impact of the Discharges

Attachment F2 – Cryptosporidium Risk Assessment for Skibbereen Regional Water Supply Scheme

### **TABLES**

### Tables D

Tables D1(i)(a), (b) & (c) Emission to Surface/Ground Water – Primary Discharge

Tables D1(iii)(a) Emission to Surface/Ground Water – Stormwater Overflow

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Table E.1 (i) Wastewater Frequency and Quality of Discharge - Primary Discharge

Tables E.1 (ii) Wastewater Frequency and Quality of Discharge – Stormwater Overflows

Tables F

Table F.1(i)(a) Surface/Ground Water Monitoring – Primary discharge

Table F.1(i)(b) Surface/Ground Water Monitoring (dangerous substances) – Primary discharge

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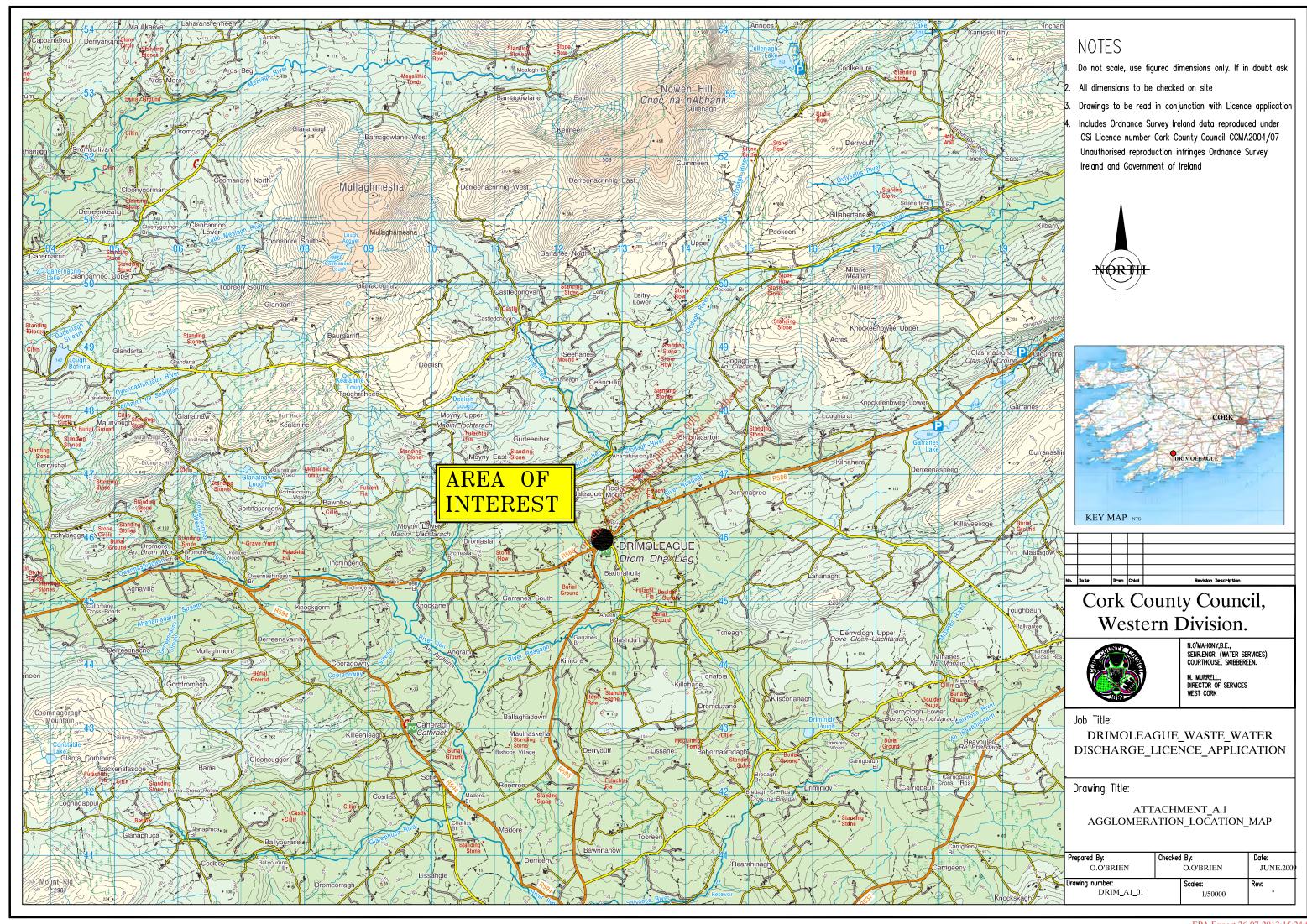
### Map:

DRIM A1-01

- Site Location Map of Agglomeration

Site Location Map of Agglomeration

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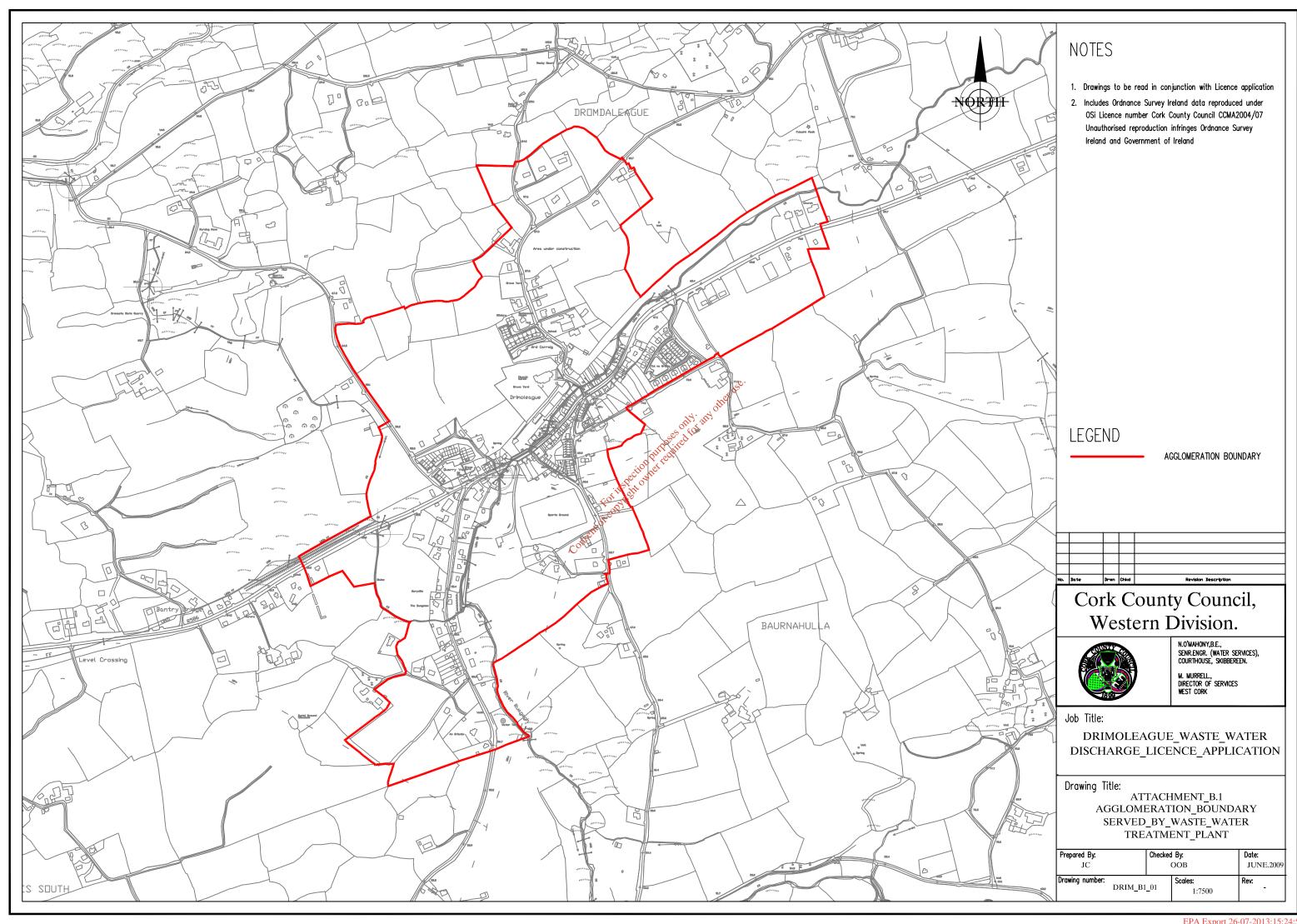
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### Drawing:

DRIM B1-01 - Drimoleague Agglomerations Boundary Map

Drimoleague Agglomerations Boundary Map

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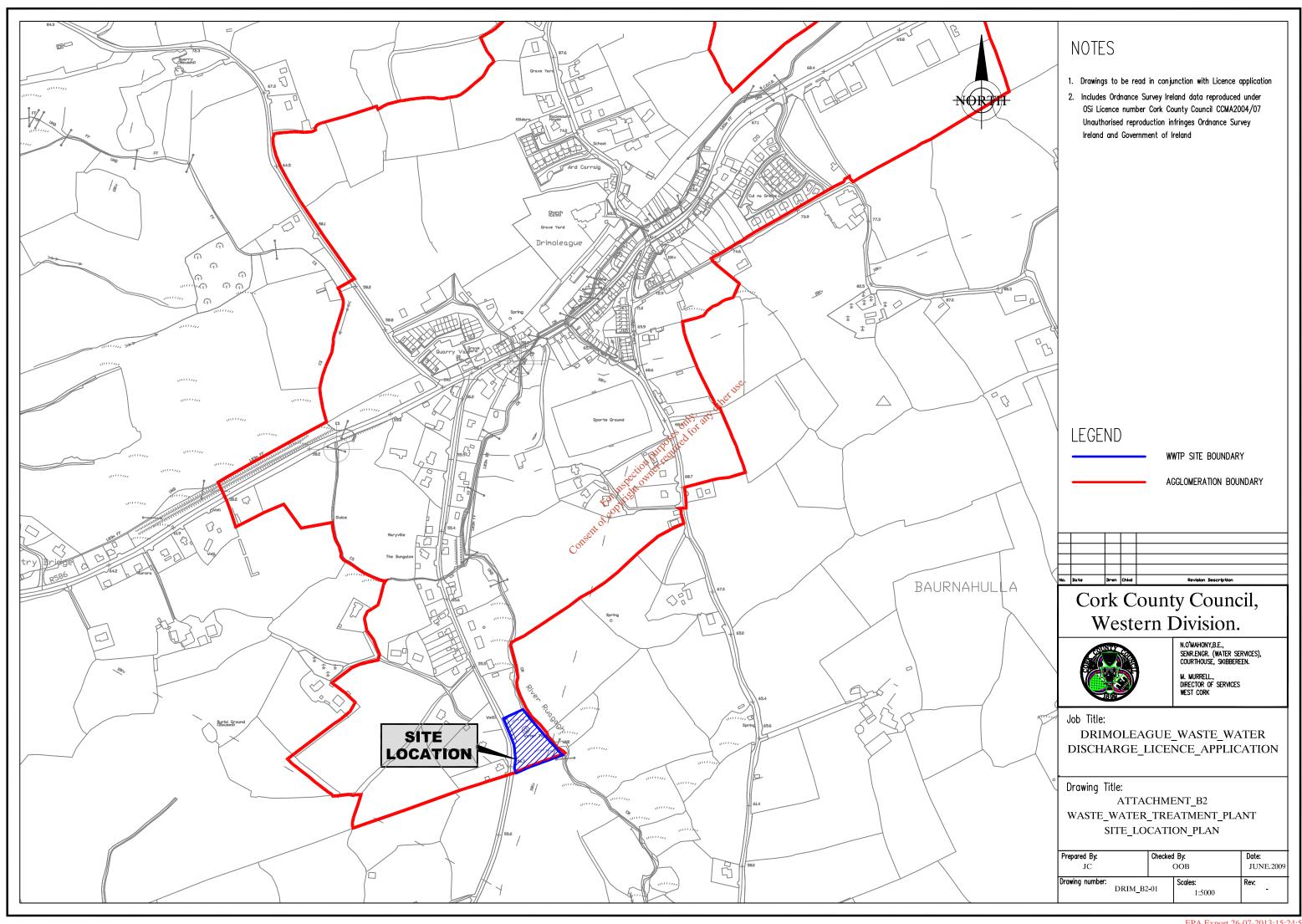


### **Drawing:**

DRIM B2-01 - Site Location Plan of Waste Water Treatment Plant

Site Location Plan of Waste Water Treatment Plant

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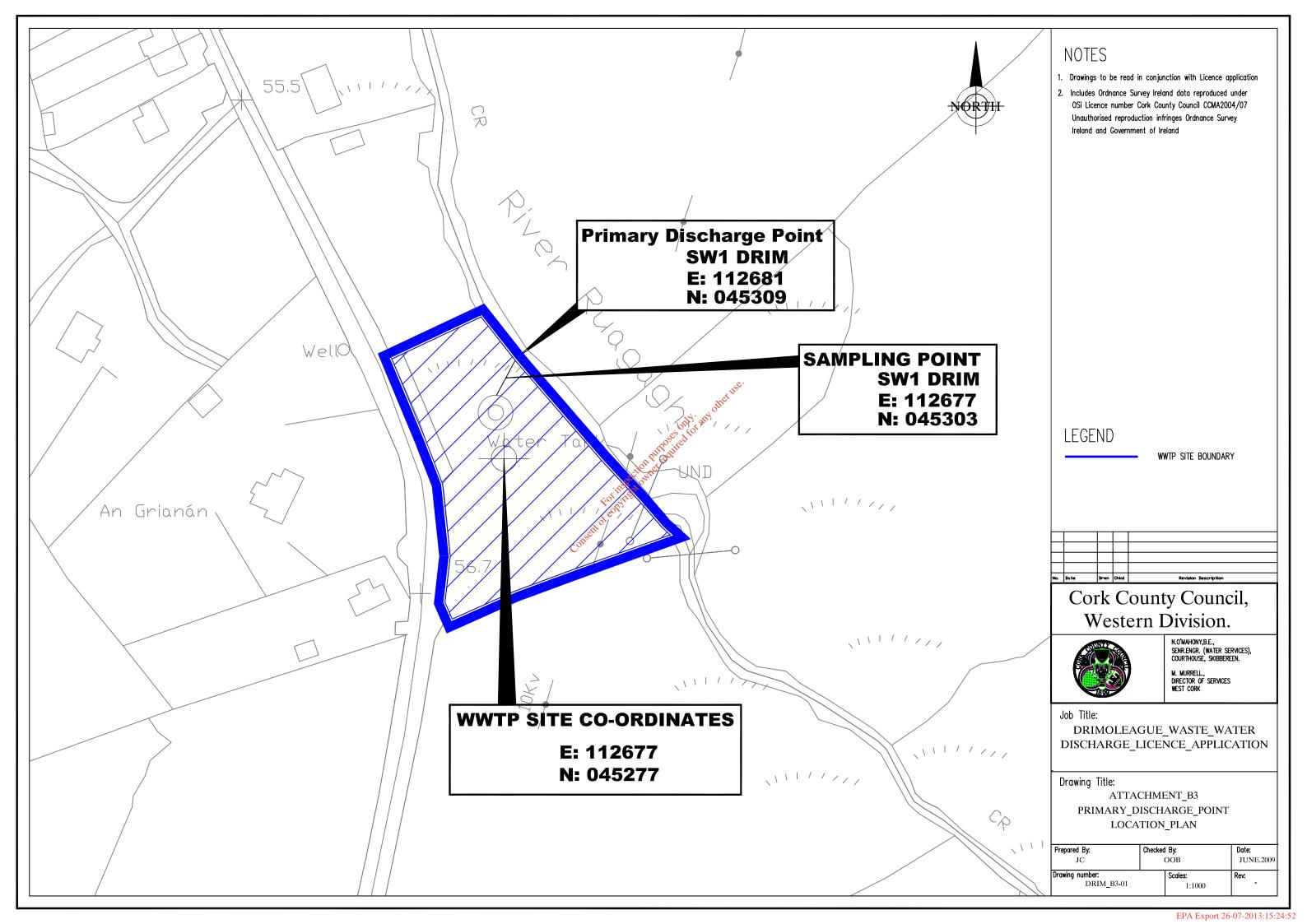
### Drawing:

• DRIM B3-01 - Primary Discharge Point Location Plan

Primary Discharge Point Location Plan

Primary Discharge Point Location Plan

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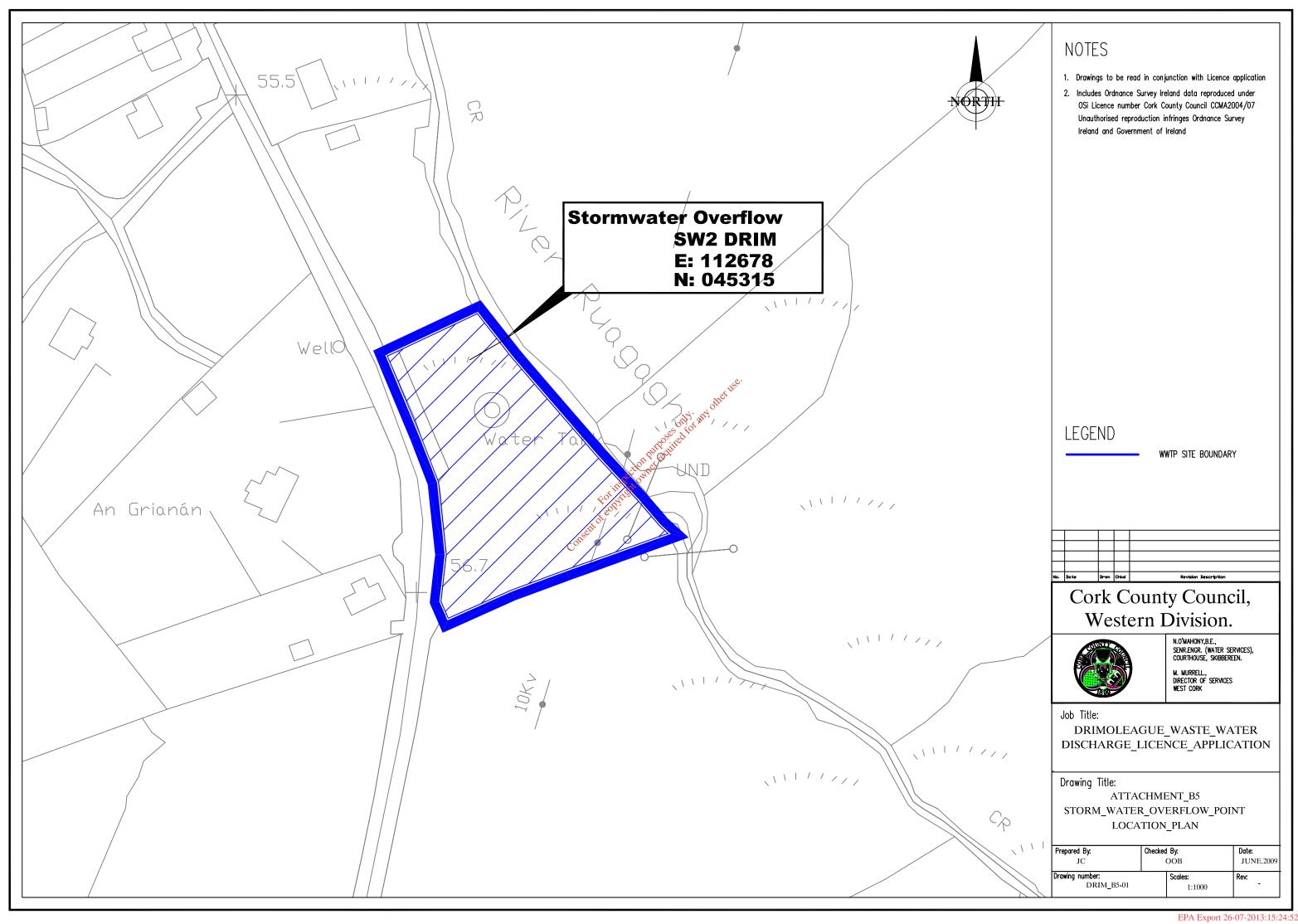


### Drawing:

• DRIM B5-01 - Stormwater Overflow Point Location Plan

Stormwater Overflow Point Location Plan

Consent of Co



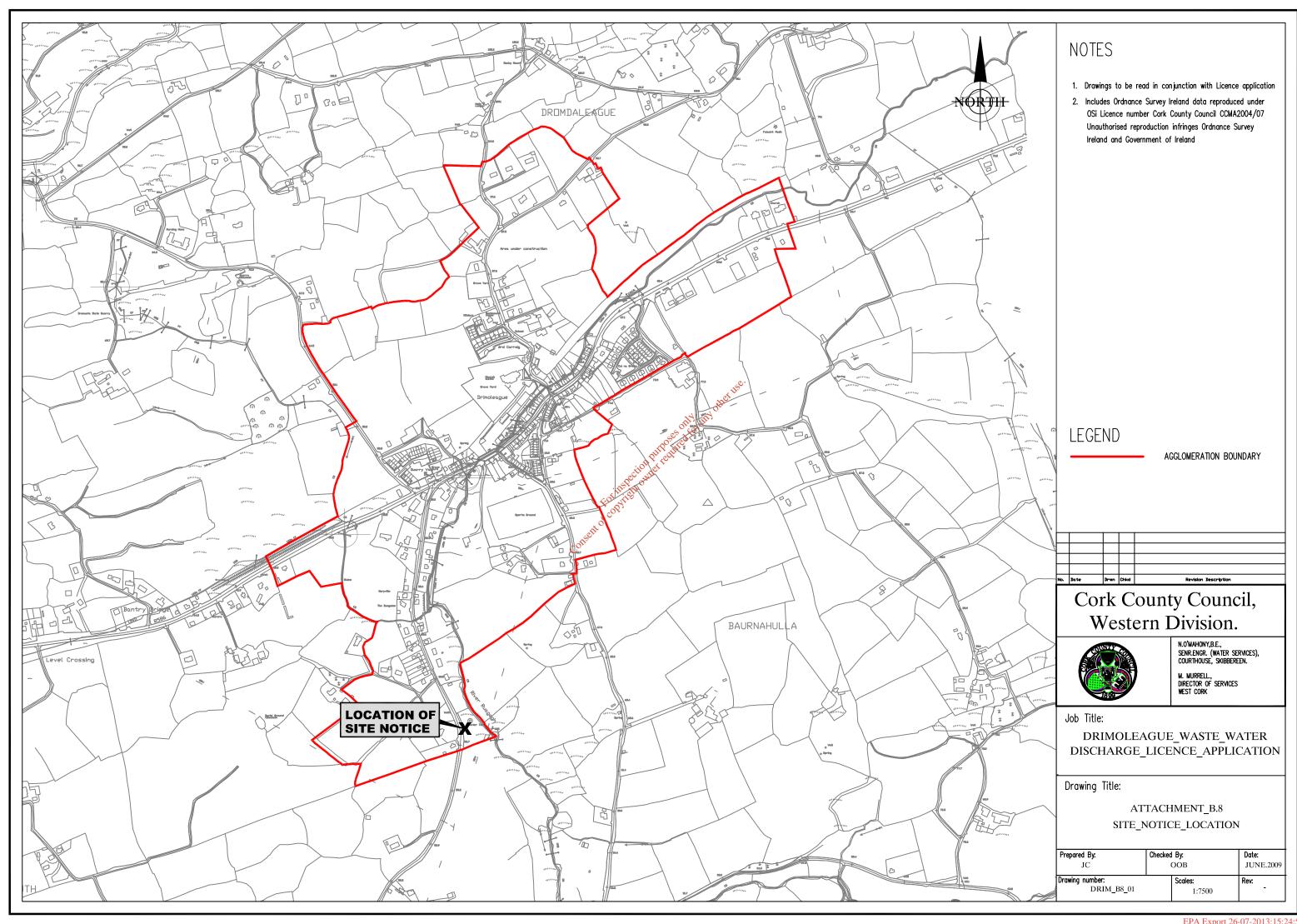
### **Drawing:**

on the tree of the printer of the copyright owner required for any other use. • DRIM B8-01 -

**Supporting Information:** 

Site Notice

Newspaper Advertisement





# CORK COUNTY COUNCIL

### **SITE NOTICE**

# APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTEWATER DISCHARGE LICENCE

In accordance with the Waste Water Discharge (Authorisation) Regulations 2007, Water Services Western Division, Cork County Council, Courthouse, Skibbereen is applying to the Environmental Protection Agency for a Waste Water Discharge Licence for Drimoleague agglomeration at the following locations:

Plant Name	Location	National Grid Ref.
Drimoleague WWTP	Drimoleague	E112677, N045277
	A COV	

Discharge	Function	Townland	Receptor	<b>Grid Reference</b>
Primary	Major	Garranes	River Ruagagh	E112681,
		South		N045309

A copy of the application for the Waste Water Discharge Licence and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the Application shall as soon as is practicable after receipt by the Agency be available for inspection or purchase at the

- Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335599 Telephone: 053-9160600 Fax: 053-9160699 Email:info@epa.ie and at
- Cork County Council Water Services (Western Division), Courthouse, Skibbereen, Co. Cork; Telephone: 028-21299 Fax: 028-21995.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above.

1 Agency for a Wastewater Discharge Licence for the ation of Killavullen at the following locations:

ame	Location	National Grid Ref.
en WWTP	Ballymacmoy, Killavullen	E164897 N099517

ge	Function	Townland	Receptor	Grid Ref.
	Main	Ballymacmoy	Ross River	E164919 N099521

f the application for the Wastewater Discharge Licence further information relating to the application as may be I to the Agency in the course of the Agency's consideration polication shall, as soon as is practicable after receipt by icy, be available for inspection or purchase at the:

onmental Protection Agency, PO Box 3000, town Castle Estate, Co. Wexford, Lo Call 1890 335 599; 53-9160600; Fax: 053-9160699; Email: info@epa.ie

County Council Offices, Annabella, Mallow, Co. Cork. 22-21123; Fax: 022-21893.

sions in relation to the application may be made to ironmental Protection Agency at its headquarters ed above:

## ATION TO THE ENVIRONMENTAL PROTECTION Y FOR A WASTEWATER DISCHARGE LICENCE

dance with the Wastewater Discharge (Authorisation) ons 2007, Water Services Northern Division, Cork County Annabella, Mallow is applying to the Environmental on Agency for a Wastewater Discharge Licence for the ration of Ballyclough at the following locations:

Name	Location	National Grid Ref.
ough WWTP	Ballyclough	E149318 N101474

urge	Function	Townland	Receptor	Grid Ref.
У	Main	Ballyclough	Finnow Stream	E149349 N101796

of the application for the Wastewater Discharge Licence h further information relating to the application as may be d to the Agency in the course of the Agency's consideration pplication shall, as soon as is practicable after receipt by ncy, be available for inspection or purchase at the:

ronmental Protection Agency, PO Box 3000, istown Castle Estate, Co. Wexford, Lo Call 1890 335 599; 053-9160600; Fax: 053-9160699; Email: info@epa.ie

k County Council Offices, Annabella, Mallow, Co. Cork. 022-21123; Fax: 022-21893.

ssions in relation to the application may be made to vironmental Protection Agency at its headquarters

### CATION TO THE ENVIRONMENTAL PROTECTION CY FOR A WASTEWATER DISCHARGE LICENCE

rdance with the Wastewater Discharge (Authorisation) tions 2007, Water Services Northern Division, Cork County I, Annabella, Mallow is applying to the Environmental ion Agency for a Wastewater Discharge Licence for the teration of Banteer at the following locations:

Name	Location	National Grid Ref.
er WWTP	Inchidaly,	E139139
A complete and	Banteer	N98377

iarge	Function	Townland		Grid Ref.
ry	Main	Banteer	River Blackwater	E139107 N98449

of the application for the Wastewater Discharge Licence ch further information relating to the application as may be ted to the Agency in the course of the Agency's consideration Application shall, as soon as is practicable after receipt by tency, be available for inspection or purchase at the:

vironmental Protection Agency, PO Box 3000, instown Castle Estate, Co. Wexford, Lo Call 1890 335 599; l: 053-9160600; Fax: 053-9160699; Email: info@epa.ie

rk County Council Offices, Annabella, Mallow, Co. Cork. l: 022-21123; Fax: 022-21893.

issions in relation to the application may be made to nvironmental Protection Agency at its headquarters ibed above.

Ter: 022-21123; rax: 022-21893.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above.

### WESTERN DIVISION

### APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTEWATER DISCHARGE LICENCE

In accordance with the Wastewater Discharge (Authorisation)
Regulations 2007, Water Services Western Division, Cork County
Council, Courthouse, Skibbereen is applying to the Environmental
Protection Agency for a Wastewater Discharge Licence for
Drimoleague agglomeration at the following locations:

Plant Name	Location	National Grid Ref.
Drimoleague WWTP	Drimoleague	E112677 N045277

Discharge	Function	Townland	Receptor	Grid Ref.
Primary		Garranes South	River Ruagagh	E112681 N045309

A copy of the application for the Wastewater Discharge Licence and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the Application shall, as soon as is practicable after receipt by the Agency, be available for inspection or purchase at the:

 Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335 5990 Tel: 053-9160600; Fax: 053-9160699; Email: info@epa.ie
and at

 Cork County Council Water Services (Western Division), Courthouse, Skibbereen, Co. Cork.
Tel: 028-21299; Fax: 028-21995.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above.

### APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTEWATER DISCHARGE LICENCE

In accordance with the Wastewater Discharge (Authorisation)
Regulations 2007, Water Services Western Division, Cork County
Council, Courthouse Skibbereen is applying to the Environmental
Protection Agency for a Wastewater Discharge Licence for
Timoleague aggromeration at the following locations:

Discharge	Function	Townland	Receptor	Grid Ref.
Primary	Main	Timoleague	Courtmacsherry Estuary	E147200 N043523
Secondary	1 3 6		Courtmacsherry Estuary	N043496
Secondary	Minor	Timoleague	Courtmacsherry Estuary	E147141 N043507
Secondary	Minor	Timoleague	Courtmacsherry Estuary	E147209 N043702
Secondary	Minor .	Timoleague	Courtmacsherry Estuary	E147176 N043789

Cork County Council proposes to construct a new wastewater treatment plant at Cullenagh, Courtmacsherry, Co. Cork, Grid Reference (E149710, N042520). It is proposed to discharge treated wastewater from this plant to Courtmacsherry Estuary. The proposed discharge location is detailed in the table below:

Discharge	Function	Townland		Grid Ref.
Primary	Main	Cullenagh	Courtmacsherry Estuary	E150732 N042818

A copy of the application for the Wastewater Discharge Licence and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the Application shall, as soon as is practicable after receipt by the Agency, be available for inspection or purchase at the:

 Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335 599; Tel: 053-9160600; Fax: 053-9160699; Email: info@epa.ie and at

 Cork County Council Water Services (Western Division), Courthouse, Skibbereen, Co. Cork.
 Tel: 028-21299; Fax: 028-21995.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above. Courthouse, Skibbereen, Co. Cork. Tel: 028-21299; Fax: 028-21995.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above.

### APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTEWATER DISCHARGE LICENCE

In accordance with the Wastewater Discharge (Authorisation)
Regulations 2007, Water Services Western Division, Cork County
Council, Courthouse, Skibbereen is applying to the Environmental
Protection Agency for a Wastewater Discharge Licence for
Ballydehob agglomeration at the following locations:

Plant Name	Location	National Grid Ref.
Ballydehob WWTP	Ballydehob	E098960
· in short and land.	en Mariantale I	N035286

Discharge	Function	Townland	Receptor	Grid Ref.
Primary	Main	Ballydehob	Ballydehob Bay	E099090 N035099

Cork County Council proposes to construct a new wastewater treatment plant at Ballydehob, Co. Cork, Grid Reference (E098949, N035278). It is proposed to discharge treated wastewater from this plant to Ballydehob Bay. The proposed location is detailed in the table below:

I	Discharge	Function	Townland		Grid Ref.
	Primary	Main	Ballydehob	Ballydehob Bay	E099090 N035099

A copy of the application for the Wastewater Discharge Licence and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the Application shall, as soon as is practicable after receipt by the Agency, be available for inspection or purchase at the:

 Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335 599; Tel: 053-9160600; Fax: 053-9160699; Email: info@epa.ie

 Cork County Council Water Services (Western Division), Courthouse, Skibbereen, Co. Cork.
 Tel: 028-21299; Fax: 028-21995.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above.

### APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTEWATER DISCHARGE LICENCE

In accordance with the Wastewater Discharge (Authorisation)
Regulations 2007, S.I. No. 684 of 2007, Water Services (Western
Division), Cork County Council, Courthouse, Skibbereen, Co. Cork
is applying to the Environmental Protection Agency for a Wastewater
Discharge Licence for the Castletownshend agglomeration at the
following locations:

Discharge	Function	Townland	Receptor	Grid Ref.
Primary	Major	Castletownshend	Castlehaven Bay	E118671 N031292
Secondary	Minor	Castletownshend	Castlehaven Bay	E118652 N031130

Cork County Council proposes to construct a Wastewater Treatment Plant at Castletownshend, Co. Cork, Grid Reference (E118620 N031623). It is proposed to discharge treated wastewater from this Plant to Castlehaven Bay. The proposed location is detailed in the table below:

Discharge	Function		Receptor	
Primary	Major .	Castletownshend	Castlehaven Bay	E118895 N031628

A copy of the application for the Wastewater Discharge Licence and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the Application shall, as soon as is practicable after receipt by the Agency, be available for inspection or purchase at the:

 Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335 599; Tel: 053-9160600; Fax: 053-9160699; Email: info@epa.ie
 and at

 Cork County Council Water Services (Western Division), Courthouse, Skibbereen, Co. Cork. Tel: 028-21299; Fax: 028-21995.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above.

• Application Fee

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# Comhairle Contae Chorcaí Cork County Council

Mr. Declan Groarke, Senior Executive Engineer, Cork County Council, Courthouse, Skibbereen.

27th May 2009

Courthouse,
Skibbereen, Co. Cork.
Tel (028) 21299 • Fax (028) 21995
Web: www.corkcoco.ie
Teach na Cúirte,
An Sciobairín, Co. Chorcaí.
Fón: (028) 21299 • Faics: (028) 21995
Suíomh Gréasáin: www.corkcoco.ie



Re:- Waste Water Discharge Regulations 2007.

Dear Declan,

With regard to the application to the EPA for Discharge Licences for the agglomerations with P.E.s of 500 to 1,000 listed below, I confirm the following in relation to the application fee of €70,000 (being €10,000 for each agglomeration).

Transferred to EPA Bank Account:- Account No. 23507098

Date Transferred to EPA Bank Account: - 21st May, 2009.

Electronic Fund Transfer Reference No.:- 1080937.

Agglomerations: Ballydehob

Castletownshend Drimoleague Glengarriff Timoleague Union Hall

Ballineen/Enniskeane

This information should be included with the application to the EPA.

Yours faithfully,

Mary Notan, Staff Officer.



# Section C Section C Section C Consent of convingence of the rest of the convingence of

EPA Export 26-07-2013:15:24:52

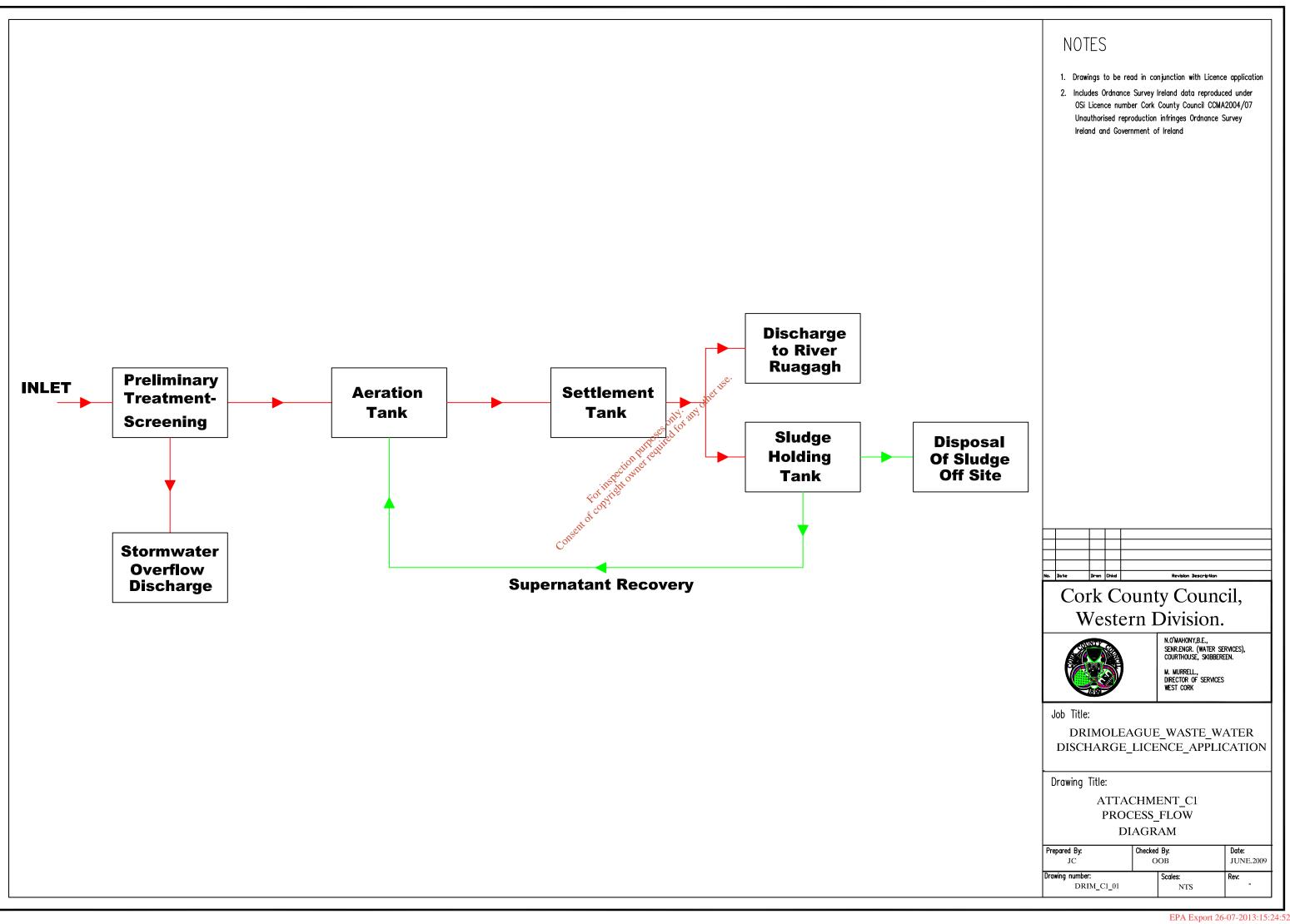
### **Drawing:**

- Process Flow Diagram of Waste Water Treatment Plant

- Process Flow Diagram of Waste Water Treatment Plant

- Consent of Confident on the Plant

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Section E other use.

Section E other use.

Consent of copyright owner required for the copyright o

# Attachment E2 Supporting Information: Monitoring Programme Forting Registration Programme Forting Registration Programme

EPA Export 26-07-2013:15:24:52

### **Attachment E.2 - Drimoleague Waste Water Discharge Licence Application – Monitoring and Sampling Points**

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

Upstream and downstream samples were also carried out on the River Ruagagh.

There is one drinking water abstraction point downstream of the plant at Ballyhilty Bridge for the Skibbereen Regional Water Supply Scheme.

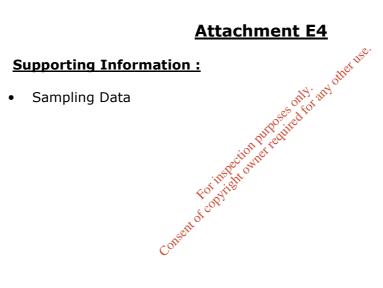
The recent sample analysis has been carried out by the Laboratory of Cork County Council which is accredited for a number of analytical tests under the Irish National Accreditation Board (INAB) under the ISO 17025 international standard. It is currently accredited for the following parameters under that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

- pH
- Biochemical Oxygen Demand
- Chemical Oxygen Demand

Chemical Oxygen Demand
Suspended Solids
Ammonia
Ortho Phosphate
Total Phosphate
Chloride
Sulphate

It is proposed to sample the influent and effluent from treatment plants where accessible and receiving waters once a year in the future for the following page. accessible and receiving waters once a year in the future for the following parameters at the Cork County Council Laboratory in Skibbereen:

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



Attachment E		ague Inlet	Table E4
Sample Date	28/01/2009	12/02/2009	
Sample	Influent	Influent	Average
Sample Code	GT128	GT176	
Flow M <sup>3</sup> /Day	*	*	
рН	6.9	*	6.9
Temperature °C	*	*	
Cond 20°C	328	*	328
SS mg/L	46	*	46
NH <sub>3</sub> mg/L	7.3	*	7.3
BOD mg/L	85	*	85
COD mg/L	167	*	167
TN mg/L	9.2	*	9.2
Nitrite mg/L	0.151	*	0.151
Nitrate mg/L	1.99	*	1.99
TP mg/L	3.5	*	3.5
O-PO4-P mg/L	0.67	*	0.67
SO4 mg/L	32.9	*	32.9
Phenols µg/L	<0.10	*	<0.10
Atrazine µg/L	<0.01	*	<0.01
Dichloromethane μg/L	<1	*	S. S.
Simazine µg/L	<0.01	*	<u>₩</u> 0.01
Toluene µg/L	<1	*	d <sup>.</sup> and <1
Tributyltin µg/L	not required	* 0	onot required
Xylenes μg/L	<1	* itpositive	<1
Arsenic µg/L	<0.96	* tellogited	<0.96
Chromium ug/L	<20	<i>~</i> `< <u>2</u> 0	<20
Copper ug/L	10	1115 Ht 332	171
Cyanide µg/L	<5 🗘	DYTE *	<5
Fluoride µg/L	70	*	70
Lead ug/L	<20 en	<20	<20
Nickel ug/L	<201	<20	<20
Zinc ug/L	<20	<20	<20
Boron ug/L	10	51	30.5
Cadmium ug/L	<20	<20	<20
Mercury μg/L	<0.2	*	<20
Selenium µg/L	1.9	*	1.9
Barium ug/L	<20	<20	<20

half LOD for statistical purposes

Attachmen					je Out	let Tal	ole E4
Sample Date	28/01/2009	12/02/2009	12/03/2009	02/04/2009			
Sample	Effluent	Effluent	Effluent	Effluent	Average	Kg/Day	Kg/year
Sample Code	GT127	GT177	GT338	GT436			
Flow M <sup>3</sup> /Day	*	*	*	*			
рН	7	*	7.1	7	7.033333		
Temperature °C	*	*	*	*			
Cond 20°C	278	*	*	*	278		
SS mg/L	14	36	38	53	35.25		
NH <sub>3</sub> mg/L	7.6	*	*	*	7.6		
BOD mg/L	26	56	48	56	46.5		
COD mg/L	126	95	83	186	122.5		
TN mg/L	9.2	15.4	15.2	31.3	17.775		
Nitrite mg/L	0.13	*	*	*	0.13		
Nitrate mg/L	1.95	*	*	*	1.95		
TP mg/L	3.6	2.7	1.9	3.13	2.8325		
O-PO4-P mg/L	0.82	*	*	*	0.82		
SO4 mg/L	<30	*	*	*	<30		
Phenols µg/L	<0.10	*	*	*	<0.10		
Atrazine µg/L	<0.01	*	*	*	<0.01		
Dichloromethane	<1	*	*	, <b>1</b> 56.	<1		
Simazine µg/L	<0.01	*	*	other*	<0.01		
Toluene µg/L	<1	*	* 113	my *	<1		
Tributyltin μg/L	not required	*	* 0 to	*	not required		
Xylenes μg/L	<1	*	illo tilied	*	<1		
Arsenic μg/L	<0.96	*	on trouble	*	<0.96		
Chromium ug/L	<20	<20	wife <20	<20	<20		
Copper ug/L	<20	<2015 dit	<20	<20	<20		
Cyanide µg/L	<5	of convine	*	*	<5		
Fluoride µg/L	28		*	*	28		
Lead ug/L	<20	<u>sen</u> <20	<20	<20	<20		
Nickel ug/L	<20 C	× <20	<20	<20	<20		
Zinc ug/L	<20	<20	<20	<20	<20		
Boron ug/L	<20	<20	<20	<20	<20		
Cadmium ug/L	<20	<20	<20	<20	<20		
Mercury µg/L	<0.2	*	*	*	<0.2		
Selenium μg/L	2	*	*	*	2		
Barium ug/L	<20	<20	<20	<20	<20		

Attachment E4 Drimoleague Upstream Table E4										
Sample Date	30/10/2008	28/01/2009	12/02/2009	12/03/2009	02/04/2009					
Sample	River	River	River	River	River	Average				
Sample Code	GS1160	GT126	GT178	GT340	GT435					
Flow M <sup>3</sup> /Day	*	*	*	*	*					
рН	*	7	*	*	*	7				
Temperature °C	*	*	*	*	*					
Cond 20°C	*	138	*	*	*	138				
SS mg/L	*	7	*	*	*	7				
NH <sub>3</sub> mg/L	*	<0.1	*	*	*	<0.1				
BOD mg/L	*	<1	*	*	*	<1				
COD mg/L	*	<21	*	*	*	<21				
TN mg/L	*	2.5	*	*	*	2.5				
Nitrite mg/L	*	0.00432	*	*	*	0.00432				
Nitrate mg/L	*	2.55	*	*	*	2.55				
TP mg/L	*	< 0.02	*	*	*	< 0.02				
O-PO4-P mg/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05				
SO4 mg/L	*	<30	*	*	*	<30				
Phenols µg/L	*	<0.10	*	*	*	<0.10				
Atrazine µg/L	*	<0.01	*	*	*	<0.01				
Dichloromethane	*	<1	*	*se.	*	<1				
Simazine µg/L	*	<0.01	*	inei*	*	<0.01				
Toluene μg/L	*	<1	*	4 m	*	<1				
Tributyltin μg/L	*	not required	* Office	*	*	not required				
Xylenes μg/L	*	<1	* * * * * * * * * * * * * * * * * * *	*	*	<1				
Arsenic μg/L	*	<0.96	n Pilite Off	*	*	<0.96				
Chromium ug/L	*	خي 20>	WII \20	720	<20	<20				
Copper ug/L	*	<20 <sub>15</sub> 0	<20	<20	<20	<20				
Cyanide μg/L	*	KS VILE	*	*	*	<5				
Fluoride µg/L	*	30%	*	*	*	30				
Lead ug/L	*	en < 20	<20	<20	<20	<20				
Nickel ug/L	*	<20	<20	<20	<20	<20				
Zinc ug/L	*	<20	<20	<20	<20	<20				
Boron ug/L	*	<20	<20	<20	<20	<20				
Cadmium ug/L	*	<20	<20	<20	<20	<20				
Mercury µg/L	*	<0.2	*	*	*	<0.2				
Selenium μg/L	*	1.4	*	*	*	1.4				
Barium ug/L	*	68	10	10	10	24.5				

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Attachment E4 Drimoleague Downstream Table E4									
Sample Date	30/10/2008	28/01/2009	12/02/2009	12/03/2009	02/04/2009				
Sample	River	River	River	River	River	Average			
Sample Code	GS1161	GT129	GT175	GT339	GT437				
Flow M <sup>3</sup> /Day	*	*	*	*	*				
рН	*	7.2	*	*	*	7.2			
Temperature °C	*	*	*	*	*				
Cond 20°C	*	152	*	*	*	152			
SS mg/L	*	<2.5	*	*	*				
NH <sub>3</sub> mg/L	*	<0.1	*	*	*				
BOD mg/L	*	2	*	*	*	2			
COD mg/L	*	<21	*	*	*				
TN mg/L	*	2.7	*	*	*	2.7			
Nitrite mg/L	*	0.019	*	*	*	0.019			
Nitrate mg/L	*	2.62	*	*	*	2.62			
TP mg/L	*	<0.02	*	*	*	<0.02			
O-PO4-P mg/L	<0.05	< 0.05	< 0.05	< 0.05	<0.05	< 0.05			
SO4 mg/L	*	<30	*	*	*	<30			
Phenols µg/L	*	<0.10	*	*	*	<0.10			
Atrazine µg/L	*	<0.01	*	*	*	<0.01			
Dichloromethane	*	<1	*	, is <sup>0</sup> .	*	<1			
Simazine µg/L	*	<0.01	*	other*	*	<0.01			
Toluene μg/L	*	<1	* 614.	* (1)	*	<1			
Tributyltin μg/L	*	not required	an Price division of the second	*	*	not required			
Xylenes μg/L	*	<1	MPO* Hirec	*	*	<1			
Arsenic μg/L	*	<0.96	on Prices	*	*	<0.96			
Chromium ug/L	*	<20 💉	W <20	<20	<20	<20			
Copper ug/L	*	<2015 ght	<20	<20	<20	<20			
Cyanide µg/L	*	\$\\ \frac{5}{5}\\ \frac{1}{1}\\ \frac{1}\\	*	*	*	<5			
Fluoride µg/L	*	52	*	*	*	52			
Lead ug/L	*	<u>seni</u> <20	<20	<20	<20	<20			
Nickel ug/L	* 0	<20	<20	<20	<20	<20			
Zinc ug/L	*	<20	<20	<20	<20	<20			
Boron ug/L	*	<20	<20	<20	<20	<20			
Cadmium ug/L	*	<20	<20	<20	<20	<20			
Mercury μg/L	*	<0.2	*	*	*	<0.2			
Selenium µg/L	*	1.7				1.7			
Barium ug/L	*	62	10	10	10	23			

HALF LOD FOR STATISTICAL PURPOSES

## **Section F**

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#### **Supporting Information:**

- - Cryptosporidium Risk Assessme Regional Water Supply Scheme Attachment F2 – Cryptosporidium Risk Assessment for Skibbereen

#### **SURFACE WATER - Introduction**

Scores should be inserted (where appropriate) into the blue boxes in Sections 1 to 10. The scores for each section will be automatically totalled (in the yellow box) and a summary of the scores for each section will appear on this sheet. The section scores will be totalled automatically on this summary sheet. The population of supply should be entered into the blue box below on this page and the overall Cryptosporidium Risk Assessment Score will be automatically calculated for the supply.

#### Skibbereen RWSS

	Section	Total
Surface Water Catchment Risk Scores	Score	Score
Section 1 - Animals within the Catchment	21	
Section 2 - Agricultural Practices within the Catchment	26	
Section 3 - Discharges to the Catchment/Water Source	13	
Section 4 - Water Source Type	8	
Section 5 - Catchment Inspections	3	
Section 6 - Raw Water Intake Management for Abstractions	-4	07
Total Surface Water Catchment Risk Score	en e	67
Surface Water - Treatment and Supply Risk Score		
Section 7 - Water Treatment Processes	-7	
Section 8a - Treatment Works Monitoring of Coagulation and Filtration	5	
Section 8b - Treatment Works Monitoring of Coagulation and Filtration	-1	
Section 8c - Treatment Works Monitoring of Coagulation and Filtration	18	
Section 8d - Treatment Works Monitoring of Coagulation and Filtration	0	
Section 8e - Treatment Works Monitoring of Coagulation and Filtration	0	
Section 8f - Treatment Works Monitoring of Coagulation and Filtration	0	
Section 9 - Rapid Gravity and Pressure Filter Works Rerformance	6	
Section 10 - Treatment Works Operation	8	
Total Surface Water - Treatment and Supply Risk Score		29
Surface Water Risk Assessment Score Population Population Weighting Factor (0.4 x log10 (population)) Final Weighted Risk Assessment Score Water Supply Risk Classification		96 4524 1.462209 140.37207 /ery High

## Section 1 - Animals Within the Catchment

Section No.	Pressure Risk Factor	RA Score	Actual Score
1.1	Cattle/calves at less than or equal to one livestock unit per hectare of forage area *	5	10
	Cattle/calves at more than one one livestock unit per hectare of forage area*	10	
	No cattle/calves in the catchment	0	
1.2	Sheep/lambs at less than or equal to one one livestock unit per hectare of forage area *	5	5
	Sheep/lambs at more than one one livestock unit per hectare of forage area *	10	
	No sheep/lambs in the catchment	0	
1.0	W/11 C 11 ' (1 (1 )	2	0
1.3	Wild or farmed deer in the catchment	2	0
	No wild or farmed deer in the catchment	0	
	The state of the s		
1.4	Pig farms in the catchment	2	2
	No pig farms in the catchment	0	
	in the treet		
1.5	Animals have direct access to water sources including feeder streams	4	4
	Fencing prevents access to water sources including feeder streams	-4	
	QCOV		
1.6	High numbers of birds	2	
1.7	Any other farmed animals or birds	1	
	Total for Se	ection 1	21

## Section 2 - Agricultural Practices Within the Catchment

Section No.	Risk Factor	RA Score	Actual Score
	Slurry spraying within the catchment	6	6
2.2	Dung spreading within the catchment	3	3
2.3	Slurry <b>or</b> dung stores	3	3
2.4	Sheep pens <b>or</b> cattle sheds	6	6
2.4	Sheep pens of cattle sheds	U	U
2.5	Lambing or calving on the catchment	8	8
	Full compliance with the Good Agricultural Practice Regulations verified by catchment inspection	-6	
	Total for Se	ction 2	26

## Section 3 - Discharges to the Catchment/Water Source

Section No.	Risk Factor	RA Score	Actual Score
	Population equivalent served by individual on-site wastewater treatment systems < 100 PE	4	6
	Population equivalent served by individual on-site wastewater treatment systems > 100 PE	6	
3.2	Population equivalent served by all wastewater works <500	4	5
3.2	Population equivalent served by all wastewater works 500 to 5,000	5	3
	Population equivalent served by all wastewater works 5,001 to 20,000	6	
	Population equivalent served by all wastewater works 20,001 to 50,000	7	
	Population equivalent served by all wastewater works > 50,000	8	
3.3	Storm water overflows	2	2
3.4	Section 4 or Integrated Pollution Prevention Control (IPPC) Licence discharge from intensive agricultural activity or agriculturally related discharge	2	
	- ithe items		
3.5	All wastewater treatment plants complying with the UWWT Regulations quality standards	-1	
	got still		_
3.6	All wastewater treatment plants complying with the UWWT Regulations quality standards	-1	
	UV inactivation at outler of wwastewater treatment plants	-2	
	Total for Se	ection 3	13

## **Section 4 - Water Source Type**

Section No.	Risk Factor	RA Score	Actual Score
4.1	Upland reservoir/lake	2	8
	Lowland long term storage reservoir/lake	4	
	Upland river or stream - bankside storage	5	
	Upland river or stream – direct abstraction	6	
	Lowland river or stream – direct abstraction or bankside storage	8	
	Total for Se	ection 4	8



## Section 5 - Catchment Inspections

Section No.	Risk Factor		Actual Score
5.1	Catchment inspections carried out at least monthly	-3	6
	Catchment inspections carried out less frequently	6	
5.2	Procedures in place to deal with irregularities on the catchment	-3	-3
	Total for Se	ction 5	3



## Section 6 - Raw Water Intake Management for Abstractions

Section No.	Risk Factor	RA Score	Actual Score
6.1	No appropriate water quality monitor on intake	3	-4
	Appropriate water quality monitor on intake that is alarmed and connected to telemetry	-2	
	Automatic intake shut down when poor water quality	-4	
	Manual intake shut down when poor water quality	-1	
	No intake shut down when poor water quality	3	
	Total for Se	ection 6	-4



## Section 7 - Water Treatment Processes

Section No.	Risk Factor	RA Score	Actual Score
7.1	Simple sand filtration (not slow sand filtration)	8	-7
	Simple sand filtration ( <b>not</b> slow sand filtration) with UV treatment	6	
	Coagulation followed by DAF/sedimentation and filtration	-10	
	Coagulation followed by DAF/sedimentation and filtration followed by UV treatment	-16	
	Coagulation followed by rapid gravity or pressure filtration (no flotation or sedimentation)	-7	
	Coagulation followed by rapid gravity or pressure filtration (no flotation or sedimentation) followed by UV treatment	-13	
	Slow sand filtration	-9	
	Slow sand filtration followed by UV treatment	-15	
	Membrane Filtration (DWI approved)	-16	
	Membrane filtration (Not DWI approved)	-2	
	Total for Se	ection 7	-7
	Total for Se Consent of Converted to Superior Consent of Converted to Superior Converted		

Coagulation			
Section No. 8a	Risk Management Factor	RA Score	Actual Score
			Score
8.1	Manual coagulant dose control – not flow proportional	5	5
	Manual coagulant pH control	5	
	Coagulant pH monitored and alarmed	-5	
	Total fo	or Section 8a	5



Clarification			
Section	Risk Management Factor	RA Score	Actual
<b>No. 8b</b>			Score
8.2	Clarified water turbidity monitor/particle counters	-1	-1
	Clarified water turbidity alarm/particle counters	-1	
	Total for S	Section 8b	-1



Rapid gravity and pressure filters		
Section Risk Management Factor No. 8c	RA Score	Actual Score
8.3 Turbidity meter/particle counter on each filter with alarm on telemetry	-5	10
Turbidity meter/particle counter on each filter but no alarm on telemetry	0	
One turbidity meter/particle counter shared by more than one filter with alarm on telemetry	-2	
One turbidity meter/particle counter shared by more than one filter but no alarm on telemetry	2	
No turbidity meters/particle counters monitoring filter performance	10	
8.4 Final water turbidity meter/particle counter with alarm on telemetry	-2	5
Final water turbidity meter/particle counter but no alarm on telemetry	2	
No final water turbidity meter/particle counter	5	
8.5 Continuous residual coagulant monitor on combined filtrate or works outlet with alarm	-5	5
Continuous residual coagulant monitor on combined filtrate or works outlet but no alarm	-1	
No continuous residual coagulant monitor on combined filtrate or works outlet	5	
in Figure 1		
8.6 Routine discrete monitoring of treated water for turbidity/residual coagulant	-2	-2
No routine discrete monitoring of treated water for turbidity/residual coagulant	2	
8.7 Turbidity of backwash supernatant monitored when recycled	-2	
Turbidity of backwash supernatant not monitored when recycled	2	
Total for	Section 8c	18

	Slow Sand Filters		
Section No. 8d	Risk Management Factor	RA Score	Actual Score
8.8	Turbidity meter/particle counter on each filter with alarm on telemetry	-5	
	Turbidity meter/particle counter on each filter but no alarm on telemetry	0	
	One turbidity meter/particle counter shared by more than one filter with alarm on telemetry	-2	
	One turbidity meter/particle counter shared by more than one filter but no alarm on telemetry	2	
	No turbidity meters/particle counters monitoring filter performance	10	
8.9	Final water turbidity meter/particle counter with alarm on telemetry	-2	
	Final water turbidity meter/particle counter but no alarm on telemetry	2	
	No final water turbidity meter/particle counter	5	
8.1	Filters matured and filtrate analysed for turbidity, coliforms and Cryptosporidium during maturation	-4	
	Filters matured but no analysis carried out on filtrate	5	
	Filters not matured	15	
	Total for S	ection 8d	0
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Membrane Filtration				
Section No. 8e	Risk Management Factor	RA Score	Actual Score	
8.11 Plant monitored and alarmed for integrity -10				
Plant monitored for integrity but not alarmed 0				
	Plant not monitored for integrity 10			
8.12 Particle counter used continuously to monitor filter performance -5				
	Total for S	Section 8e	0	



UV Inactivation						
Section No. 8f	Risk Management Factor	RA Score	Actual Score			
8.13	Plant monitored for integrity and correct UV dosage	0				
	Plant monitored and alarmed for integrity and correct UV dosage	-10				
	Plant neither monitored nor alarmed 10					
8.14	Influent turbidity consistently < 0.2 NTU	-6				
	Influent turbidity consistently < 1.0 NTU	-3				
	Influent turbidity consistently > 1.0 NTU	-1				
Total for Section 8f						



## **Section 9 - Rapid Gravity and Pressure Filter Works Performance**

Item No.	Risk Factor	RA Score	Actual Score
9.1	Final water turbidity increases by more than 50%, excluding normal backwash period or turbidity in the final water >1.0 NTU	4	4
	Treated water turbidity increases by less than 50%, excluding normal backwash period and turbidity in the final water <1.0 NTU	0	
9.2	Media loss from any filter has brought media depth below design level	6	
7.2	Media depth above minimum design level with audit trail maintained	-2	
9.3	Signs of media cracking on any filter	4	4
9.4	All filters have been drained, inspected and any necessary remedial action taken within last year	-2	
9.5	Air scour and backwash maintained and operating efficiently as per maintenance manual	-2	-2
	Total for Se	ection 9	6
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## Section 10 - Treatment Works Operation

Item No.	Risk Factor	RA Score	Actual Score
10.1	Plant with documented management systems that includes procedures and process control manuals	-2	
	Process control manuals specific to works available	-1	-1
	Process control manuals specific to works not available	1	
10.2	Auditable action plans available for dealing with deviations in quality and evidence of implementation of the plan	-1	1
	Auditable action plans not available for dealing with deviations in quality	1	
10.3	Slow start facility on filters operational	-4	4
	No slow start facility on filters, or slow start facility not operational	4	
	.◊.		
10.4	Filters run to waste for appropriate period after backwash	-6	4
	Filters run to head of works for a period following backwash	-4	1
	Filters not run to waste or head of works for a period following backwash	4	
	id of et		
10.5	Backwash water and/or sludge supernatant has to be recycled	2	-2
	Other disposal route available for backwash water and sludge supernatant	-2	
	and Septil		
10.6	Water flow through works when operating has not increased by >10% in <30 minutes in last 12 months	-2	2
	Water flow through works when operating has increased by $>10\%$ in $<30$ minutes in last 12 months	2	
10.7	Flow through works above design flow for >10% of time in last 12 months	4	0
	Flow through works above design flow for ≤10% of time in last 12 months	0	
	Flow through works >130% above design flow for >50% of time in last 12 months	6	
10.8	Filters bypassed during the year	6	
	Total for S	Section 10	8

Skibbereen RWSS Catchment Livestock by DED

DED Name				Grassland Ha	Dairy LU	Drystock LU	Sheep LU
Dromdaleague Nort	18297	2427	15	1755		460	803
Dromdaleague Sout		2108	35	1670	1386	915	419
Garranes	18299	2066	18	1238	1188	766	3
Gortnascreeney	18300	2446	60	2189	2099	1133	108
Bredagh	18288	1684	72	1603	2045	1287	0
Carrigbaun	18291	2060	54	1698	1742	1078	0
Caheragh	18289	2524	4	1794	1198	926	152
Killenleagh	18302	1727	59	1591	1934	1287	1
Cloghdonnell	18294	2348	31	1614	1543	1158	0
Woodfort	18308	1694	27	1366	1580	1162	
Shreelane	18305	1919	10	1276	1255	813	, 15 <sup>6</sup> 0
							differ
						33. 9	8
Total		23003	385	17794	16661	10985	1486

Cattle LU/Ha 1.5537 Sheep LU/Ha 0.0835

Total Dairy & Drystock LU/Grassland Ha Sheep LU/Grassland Ha periorner

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#### Notes:

Catchment to abstraction point located on GIS using subcatchment mapping data; Inniscarra GIS data on Laney, Common Datasets, environ, river, EPA MP Upstream.TAB.

Catchment is outlined on GIS.

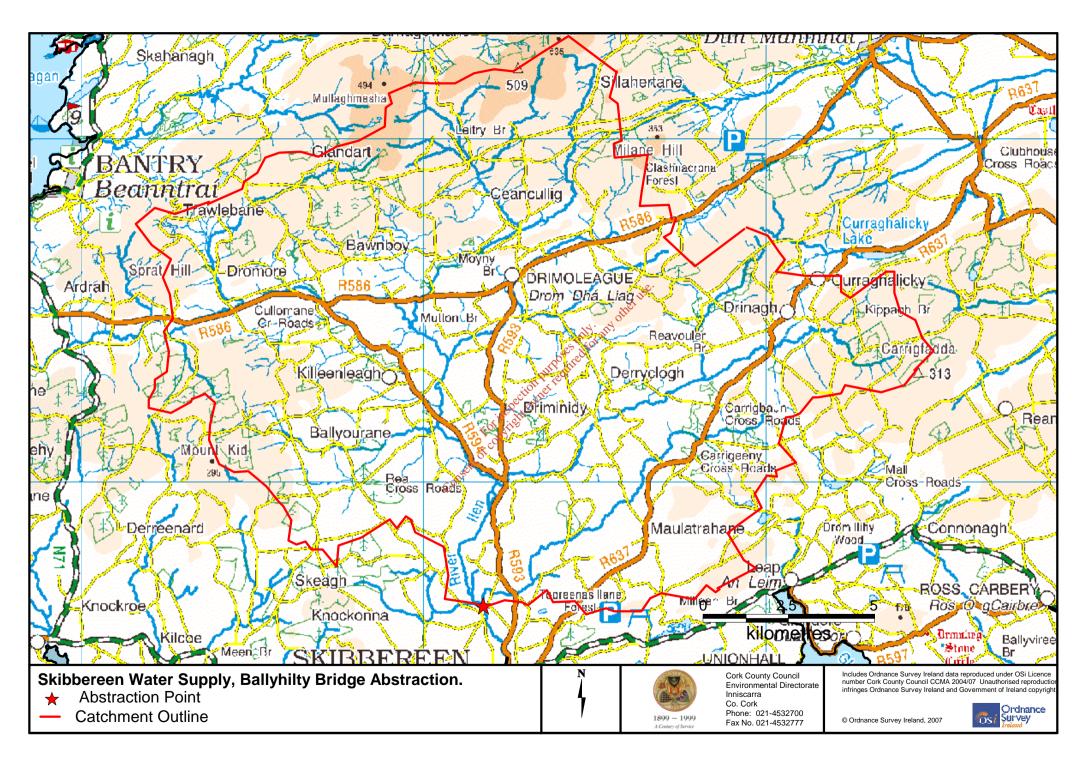
Data on DED name, Ref. No., Ha, & livestock nos. is taken from; Inniscarra GIS data on Laney, SWRBD, Datastore, GIS Data, SWRBD Mapinfo Files, SWRBD, Teagasc, Total Tillage.tab, LU Livestock.tab, LU Dairy.tab, LUSheep.tab

Tables above opened on GIS & data on DED Name, DED91 (unique DED id), Total area, Tillage area, Grassland area are all taken from Total Tillage.tab. Dairy LU (Livestock Units) taken from LU Dairy.tab, Other cattle (Drystock) LU taken from LU Livestock.tab

Dairy & Drystock LU are added together to give total Cattle LU in Catchment, result is divided by Grassland area to get LU Cattle/ha in catchment. Sheep LU is divided by Grassland area to get Sheep LU/ha in catchment.

Note: Data on Teagasc files may not be totally reliable as a number of errors were noticed during calculations. However in my opinion data is sufficient to make a decision as to whether stocking rate is > or < 1LU/ha as per sections 1.1 & 1.2 of Crypto Ri

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## Agglomeration details

Leading Local Authority	Cork County Council
Co-Applicants	
Agglomeration	Drimoleague
Population Equivalent	990
Level of Treatment	Secondary
Treatment plant address	Drimoleague, Co. Cork
Grid Ref (12 digits, 6E, 6N)	112677 / 045277
EPA Reference No:	

#### Contact details

Contact Name:	Declan Groarke	
Contact Address:	Water Services Section Cork County Council Western Division The Courthouse Skibbereen Co Cork	
Contact Number:	028-212990 (A)	
Contact Fax:	028-21995	
Contact Email:	declari groarke@corkkcoco.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:	SW01 DRIM			
Source of Emission:	Primary Discharge			
Location:	Drimoleague			
Grid Ref (12 digits, 6E, 6N)	112681 / 045309			
Name of Receiving waters:	River Ruagagh			
Water Body:	River Water Body			
River Basin District	South Western RBD			
Designation of Receiving Waters:	None			
Flow Rate in Receiving Waters:	0 m³.sec-1 Dry Weather Flow			
	0.08158 m³.sec-1 95% Weather Flow			
Additional Comments (e.g. commentary on zero flow or other information deemed of value)	No information available for the Flow Rate of Receiving Water (DWF) for the River Ruagagh.			

#### **Emission Details:**

(i) Volume emitted			other		
Normal/day	247.5 m <sup>3</sup>	Maximum/dayouth and	742.5 m <sup>3</sup>		
Maximum rate/hour	30.94 m³	Period of emission (avg)	60 min/hr	24 hr/day	365 day/yr
Dry Weather Flow	0.02 m <sup>3</sup> /sec	action net			
Diy Wediner Flow   0.02 m / 000		For its direction of the condition of th			

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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	pН	Grab	= 9			
Temperature	°C	Grab	= 0			
Electrical Conductivity (@ 25°C)	μS/cm	Grab	= 0			
Suspended Solids	mg/l	Grab	= 53	13.12		
Ammonia (as N)	mg/l	Grab	= 0	0		
Biochemical Oxygen Demand	mg/l	Grab	= 56	13.86		
Chemical Oxygen Demand	mg/l	Grab	= 186	46.04		
Total Nitrogen (as N)	mg/l	Grab	= 35	8.67		
Nitrite (as N)	mg/l	Grab	= 0	0		
Nitrate (as N)	mg/l	Grab	= 0	0		
Total Phosphorous (as P)	mg/l	Grab	= 8	1.98		
OrthoPhosphate (as P)	mg/l	Grab	= 6	1.49		
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. on the control of the contr

# 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	<b>,</b> ≅ 0	0
Cadmium	μg/l	Grab 💉	= 0	0
Mercury	μg/l	Grab	= 0	0
Selenium	μg/l	Grab or all	= 0	0
Barium	μg/l	Grab Grab Grab Grab Grab Grab Grab 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 are quivalent.

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

Discharge Point Code: SW-2

Lead Address Dates	OM/OO DDIM			
Local Authority Ref No:	SW02 DRIM			
Source of Emission:	Stormwater Overflow			
Location:	Drimoleague			
Grid Ref (12 digits, 6E, 6N)	112678 / 045315			
Name of Receiving waters:	River Ruagagh			
Water Body:	River Water Body			
River Basin District	South Western RBD			
Designation of Receiving Waters:	none			
Flow Rate in Receiving Waters:	0 m³.sec-1 Dry Weather Flow			
	0 m³.sec-1 95% Weather Flow			
Additional Comments (e.g. commentary on zero flow or other information deemed of value)	No information available on the stormwater overflow			

#### **Emission Details:**

Emission Details:			, USC.		
(i) Volume emitted			other		
Normal/day	0 m <sup>3</sup>	Maximum/dayon of all all all all all all all all all al	0 m³		
Maximum rate/hour	0 m <sup>3</sup>	Period of emission (avg)	0 min/hr	0 hr/day	0 day/yr
Dry Weather Flow	0 m³/sec	ection et			
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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 (m³/annum)
SW-1	365	90337.5



## 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 (m³/annum)	Complies with Definition of Storm Water Overflow
SW-2	0	0	No



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

#### **Primary Discharge Point**

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1d
Grid Ref (12 digits, 6E, 6N)	112893 / 044863 (Verifed using GPS)

Parameter		Resul	ts (mg/l)		Sampling method	Sampling Limit of Quantitation	Analysis method / technique
	30/07/08	11/09/08	30/10/08	01/01/09			
рН					Grab	2	Electrochemic al
Temperature				= 0	Grab	0.5	Electrochemic al
Electrical Conductivity (@ 25°C)					Grab	0.5	Electrochemic al
Suspended Solids					Grab	0.5	Gravimetric
Ammonia (as N)		< 0.1			Grab	0.02	Colorimetric
Biochemical Oxygen Demand					Grab	0.06	Electrochemic al
Chemical Oxygen Demand				. 1150.	Grab	8	Digestion & Colorimetric
Dissolved Oxygen				= 0 Mer	Grab	0	ISE
Hardness (as CaCO₃)				±0,03	Grab	0	Titrimetric
Total Nitrogen (as N)			2050	of for any of	Grab	0.5	Digestion & Colorimetric
Nitrite (as N)			alifecti	30	Grab	0.013	Colorimetric
Nitrate (as N)			ion of feet		Grab	0.04	Colorimetric
Total Phosphorous (as P)		•	p petion purpose		Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)	< 0.05	< 0.05	<b>√</b> 20.05		Grab	0.02	Colorimetric
Sulphate (SO <sub>4</sub> )		් ුර්	₹,		Grab	30	Turbidimetric
Phenols (Sum)		ento			Grab	0.1	GC-MS2

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

Additional Comments:	default of 01/01/09 and 0 used where results are not available

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Parameter		Res	sults (mg/l)		Sampling Limit of Quantitation		Analysis method / technique
	28/01/09	12/02/09	12/03/09	02/04/09			
рН	= 7.2				Grab	2	Electrochemic al
Temperature					Grab	0.5	Electrochemic al
Electrical Conductivity (@ 25°C)	= 152				Grab	0.5	Electrochemic al
Suspended Solids	< 2.5				Grab	0.5	Gravimetric
Ammonia (as N)	< 0.1				Grab	0.02	Colorimetric
Biochemical Oxygen Demand	= 2				Grab	0.06	Electrochemic al
Chemical Oxygen Demand	< 21				Grab	8	Digestion & Colorimetric
Dissolved Oxygen					Grab	0	ISE
Hardness (as CaCO₃)					Grab	0	Titrimetric
Total Nitrogen (as N)	= 2.7				Grab	0.5	Digestion & Colorimetric
Nitrite (as N)	= 0.019				Grab	0.013	Colorimetric
Nitrate (as N)	= 2.62				Grab	0.04	Colorimetric
Total Phosphorous (as P)	< 0.2				Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)	< 0.05	< 0.05	< 0.05	< 0.05	Grab	0.02	Colorimetric
Sulphate (SO <sub>4</sub> )	< 30				Grab	30	Turbidimetric
Phenols (Sum)	< 0.1				Grab	0.1	GC-MS2

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45 und filter paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: U

Additional Comments: default of 01/01/09 and 0 used where results are not available

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

#### Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1d
Grid Ref (12 digits, 6E, 6N)	112893 / 044863 (Verifed using GPS)

Parameter		Re	sults (µg/l)		Sampling method	Limit of Quantitation	Analysis method / technique
	11/09/08	01/01/09	28/01/09	12/02/09			
Atrazine			< 0.01		Grab	0.96	HPLC
Dichloromethane			< 1		Grab	1	GC-MS1
Simazine			< 0.01		Grab	0.01	HPLC
Toluene			< 1		Grab	0.02	GC-MS1
Tributyltin		= 0			Grab	0.02	GC-MS1
Xylenes			< 1		Grab	1	GC-MS1
Arsenic			< 0.96		Grab	0.96	ICP-MS
Chromium	< 20		< 20	< 20	Grab	20	ICP-OES
Copper	< 20		< 20	< 20	Grab	20	ICP-OES
Cyanide			< 5	Jeo.	Grab	5	Colorimetric
Flouride			= 52	ner	Grab	100	ISE
Lead	< 20		< 20	< 20 de	Grab	20	ICP-OES
Nickel	< 20		< 20	< 20 other the	Grab	20	ICP-OES
Zinc	< 20				Grab	20	ICP-OES
Boron	< 20		< 20 sec	< 20	Grab	20	ICP-OES
Cadmium	< 20		< 2000 25 1000	< 20	Grab	20	ICP-OES
Mercury			50.24 Th		Grab	0.2	ICP-MS
Selenium			, 'S = \$\.7		Grab	0.74	ICP-MS
Barium	< 20	\$ <sup>6</sup>	62	< 20	Grab	20	ICP-OES

Additional Comments:	TBT value is 0.02ug/l as sn TBT testing not required
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Parameter		Results (µg/l)	Sampling method	Limit of Quantitation	Analysis method / technique
	12/03/09	02/04/09			
Atrazine			Grab	0.96	HPLC
Dichloromethane			Grab	1	GC-MS1
Simazine			Grab	0.01	HPLC
Toluene			Grab	0.02	GC-MS1
Tributyltin			Grab	0.02	GC-MS1
Xylenes			Grab	1	GC-MS1
Arsenic			Grab	0.96	ICP-MS
Chromium	< 20	< 20	Grab	20	ICP-OES
Copper	< 20	< 20	Grab	20	ICP-OES
Cyanide			Grab	5	Colorimetric
Flouride			Grab	100	ISE
Lead	< 20	< 20	Grab	20	ICP-OES
Nickel	< 20	< 20	Grab	20	ICP-OES
Zinc	< 20	< 20	Grab	20	ICP-OES
Boron	< 20	< 20	Grab	20	ICP-OES
Cadmium	< 20	< 20	Grab	20	ICP-OES
Mercury			Grab	0.2	ICP-MS
Selenium			Grab	0.74	ICP-MS
Barium	< 20	< 20	Grab	20	ICP-OES

Additional Comments:	TBT value is 0.02ug/l as Sn TBT testing not required
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### TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING

#### **Primary Discharge Point**

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1u
Grid Ref (12 digits, 6E, 6N)	112653 / 045904 (Verifed using GPS)

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	30/07/08	11/09/08	30/10/08	01/01/09			
рН					Grab	2	Electrochemic al
Temperature				= 0	Grab	0.5	Electrochemic al
Electrical Conductivity (@ 25°C)					Grab	0.5	Electrochemic al
Suspended Solids					Grab	0.5	Gravimetric
Ammonia (as N)		< 0.1			Grab	0.02	Colorimetric
Biochemical Oxygen Demand					Grab	0.06	Electrochemic al
Chemical Oxygen Demand				. 1150.	Grab	8	Digestion & Colorimetric
Dissolved Oxygen				= 0 Mer	Grab	0	ISE
Hardness (as CaCO₃)				±0,03	Grab	0	Titrimetric
Total Nitrogen (as N)			2050	of for any of	Grab	0.5	Digestion & Colorimetric
Nitrite (as N)			alifecti	30	Grab	0.013	Colorimetric
Nitrate (as N)			ion of feet		Grab	0.04	Colorimetric
Total Phosphorous (as P)		•	p petion purpose		Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)	< 0.05	< 0.05	<b>√</b> 20.05		Grab	0.02	Colorimetric
Sulphate (SO <sub>4</sub> )		් ුර්	₹,		Grab	30	Turbidimetric
Phenols (Sum)		ento			Grab	0.1	GC-MS2

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

Additional Comments:	01/01/09 and 0 used as default where results are not available

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Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	28/01/09	12/02/09	12/03/09	02/04/09			
рН	= 7				Grab	2	Electrochemic al
Temperature					Grab	0.5	Electrochemic al
Electrical Conductivity (@ 25°C)	= 138				Grab	0.5	Electrochemic al
Suspended Solids	= 7				Grab	0.5	Gravimetric
Ammonia (as N)	< 0.1				Grab	0.02	Colorimetric
Biochemical Oxygen Demand	< 1				Grab	0.06	Electrochemic al
Chemical Oxygen Demand	< 21				Grab	8	Digestion & Colorimetric
Dissolved Oxygen					Grab	0	ISE
Hardness (as CaCO <sub>3</sub> )					Grab	0	Titrimetric
Total Nitrogen (as N)	= 2.5				Grab	0.5	Digestion & Colorimetric
Nitrite (as N)	= 0.0432				Grab	0.013	Colorimetric
Nitrate (as N)	= 2.55				Grab	0.04	Colorimetric
Total Phosphorous (as P)	< 0.2				Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)	< 0.05	< 0.05	< 0.05	< 0.05	Grab	0.02	Colorimetric
Sulphate (SO <sub>4</sub> )	< 30				Grab	30	Turbidimetric
Phenols (Sum)	< 0.1				Grab	0.1	GC-MS2

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45 und filter paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: USEPA Method 6240, or equivalent of the sample filtered on 0.45 under paper For Phenols: U

Additional Comments:

01/01/09 and 0 used as default where results are not available

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

#### Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1u
Grid Ref (12 digits, 6E, 6N)	112653 / 045904 (Verifed using GPS)

Parameter		Re	sults (µg/l)	Sampling method	Limit of Quantitation	Analysis method / technique	
	11/09/08	01/01/09	28/01/09	12/02/09			
Atrazine			< 0.01		Grab	0.96	HPLC
Dichloromethane			< 1		Grab	1	GC-MS1
Simazine			< 0.01		Grab	0.01	HPLC
Toluene			< 1		Grab	0.02	GC-MS1
Tributyltin		= 0			Grab	0.02	GC-MS1
Xylenes			< 1		Grab	1	GC-MS1
Arsenic			< 0.96		Grab	0.96	ICP-MS
Chromium	< 20		< 20	< 20	Grab	20	ICP-OES
Copper	< 20		< 20	< 20	Grab	20	ICP-OES
Cyanide			< 5	Jeo.	Grab	5	Colorimetric
Flouride			= 30	ner	Grab	100	ISE
Lead	< 20		< 20	< 20 de	Grab	20	ICP-OES
Nickel	< 20		< 20	< 20 other the	Grab	20	ICP-OES
Zinc	< 20				Grab	20	ICP-OES
Boron	< 20		< 20 sec	< 20	Grab	20	ICP-OES
Cadmium	< 20		< 2000 25 1000	< 20	Grab	20	ICP-OES
Mercury			50.24 Th		Grab	0.2	ICP-MS
Selenium			. 17 = 14.4		Grab	0.74	ICP-MS
Barium	< 20	\$ <sup>6</sup>	68	< 20	Grab	20	ICP-OES

Additional Comments:	TBT value is 0.02ug/l as sn TBT testing not required,
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#### WWD Licence Application Annex I

Parameter		Results (µg/l)	Sampl method	ing Limit of Quantitation	Analysis method / technique
	12/03/09	02/04/09			
Atrazine			Grab	0.96	HPLC
Dichloromethane			Grab	1	GC-MS1
Simazine			Grab	0.01	HPLC
Toluene			Grab	0.02	GC-MS1
Tributyltin			Grab	0.02	GC-MS1
Xylenes			Grab	1	GC-MS1
Arsenic			Grab	0.96	ICP-MS
Chromium	< 20	< 20	Grab	20	ICP-OES
Copper	< 20	< 20	Grab	20	ICP-OES
Cyanide			Grab	5	Colorimetric
Flouride			Grab	100	ISE
Lead	< 20	< 20	Grab	20	ICP-OES
Nickel	< 20	< 20	Grab	20	ICP-OES
Zinc	< 20	< 20	Grab	20	ICP-OES
Boron	< 20	< 20	Grab	20	ICP-OES
Cadmium	< 20	< 20	Grab	20	ICP-OES
Mercury			Grab	0.2	ICP-MS
Selenium			Grab	0.74	ICP-MS
Barium	< 20	< 20	Grab	20	ICP-OES

Additional Comments: TBT value is 0.02ug/l as Sn TBT testing not required,

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#### Annex 2: Check List For Regulation 16 Compliance

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

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

	ion 16(1) ase of an application for a waste water discharge licence, the application shall -	Attachment Number	Checked by Applicant
(a)	give the name, address, telefax number (if any) and telephone number of the applicant (and, if different, of the operator of any treatment plant concerned) and the address to which correspondence relating to the application should be sent and, if the operator is a body corporate, the address of its registered office or principal office,	B.1	Yes
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,	Not applicable	Yes
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the waste water treatment plant and/or the waste water discharge point or points to which the application relates,	B.2	Yes
(d)	state the population equivalent of the agglomeration to which the application relates,	B.9(i)	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,	C,D	Yes
(f)	give details of the receiving water body, including its protected area status, if any, and details of any sensitive areas or protected areas or both in the vicinity of the discharge point or points likely to be affected by the discharge concerned, and for discharges to ground provide details of groundwater protection schemes in place for the receiving water body and all associated hydrogeological and geological assessments related to the receiving water environment in the vicinity of the discharge.		Yes
(g)	identify monitoring and sampling points and indicate proposed arrangements for the monitoring of discharges and, if Regulation 17 does not apply, provide details of the likely environmental consequences of any such discharges,	E.2, E.3	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,	E.4	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,	G.3	Yes
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,	F.2	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,	F.1	Yes
(I)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,	E.1, E.4	Yes
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.	G.1	Yes
(n)	Any other information as may be stipulated by the Agency.	Not applicable	Yes
Without	ion 16(3) prejudice to Regulation 16 (1) and (2), an application for a licence shall be anied by -	Attachment Number	Checked by Applicant
(a)	a copy of the notice of intention to make an application given pursuant to Regulation 9,	B.8	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 -	В	Yes
(c) (i)	the point or points, including storm water overflows, from which a discharge or discharges take place or are to take place, and	B.3, B5	Yes
(c) (ii)	the point or points at which monitoring and sampling are undertaken or are to be undertaken,	E.3	Yes
(d)	such fee as is appropriate having regard to the provisions of Regulations 38 and 39.	B.9(iii)	Yes

## WWD Licence Application Annex II

An origi	tion 16(4) nal application shall be accompanied by 2 copies of it and of all accompanying ents and particulars as required under Regulation 16(3) in hardcopy or in an electronic format as specified by the Agency.	Attachment Number	Checked by Applicant
1	An Original Application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under regulation 16(3) in hardcopy or in electronic or other format as specified by the agancy.		Yes
For the associa	tion 16(5) purpose of paragraph (4), all or part of the 2 copies of the said application and ted documents and particulars may, with the agreement of the Agency, be submitted in tronic or other format specified by the Agency.	Attachment Number	Checked by Applicant
1	Signed original.		Yes
2	2 hardcopies of application provided or 2 CD versions of application (PDF files) provided.		Yes
3	1 CD of geo-referenced digital files provided.		Yes
subject to 2001 respect stateme	tion 17 a treatment plant associated with the relevant waste water works is or has been to the European Communities (Environmental Impact Assessment) Regulations 1989, in addition to compliance with the requirements of Regulation 16, an application in of the relevant discharge shall be accompanied by a copy of an environmental impact and approval in accordance with the Act of 2000 in respect of the said development by be submitted in an electronic or other format specified by the Agency	Attachment Number	Checked by Applicant
1	EIA provided if applicable	Not applicable	Yes
2	2 hardcopies of EIS provided if applicable.	Not applicable	Yes
3	2 CD versions of EIS, as PDF files, provided.	Not applicable	Yes
Regulation the capplication	tion 24 ase of an application for a waste water discharge certificate of authorisation, the tion shall –	Attachment Number	Checked by Applicant
(a)	give the name, address, telefax number (if any) and telephone number of the applicant and the address to which correspondence relating to the application should be sent and, if the operator of the waste water works is a body corporate, the address of its registered office or principal office	e·	
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,		
c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the discharge point or points to which the application relates,		
d)	state the population equivalent of the agglomeration to which the application relates,		
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,		
f)	specify the content and extent of the waste water discharge, the level of treatment provided and the flow and type of discharge,		
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,		
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,		
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,		
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,		
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,		
l)	give details of any designation under any Council Directive or Regulations that apply in relation to the receiving waters,		
m)	give details of compliance with any applicable monitoring requirements and treatment standards,		
n)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work,		
o)	give any other information as may be stipulated by the Agency, and		
(p)	be accompanied by such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		