Courtmacsherry-Timoleague

Waste Water Discharge

Authorisation Application

Dr. Karen Creed
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Environmental Protection Agency
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7th September 2016

Dear Karen,

RE: Courtmacsherry-Timoleague Waste Water Discharge Authorisation Application

Please find attached the Waste Water Discharge Authorisation Application for the Courtmacsherry-Timoleague agglomeration in accordance with the Waste Water Discharge Authorisation Regulations, 2007 (S.I. No. 684 of 2007), as amended.

I confirm that the content of the electronic files on the accompanying CD-ROM is a true copy of the original application form.

There are 2 hard copies and 2 electronic copies of this application. An electronic copy of the digital drawings is included on the CD-ROM accompanying this application.

Best Regards,

Sheelagh Flanagan

Environmental Licensing Specialist

This is a draft document and is subject to revision.

Waste Water Discharge Licence Application Form

EPA Ref. N^{o}: *(Office use only)*	

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

Tracking Amendments to Draft Application Form

Version No.	Date	Amendment since previous version	Reason
V. 1.	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'. Amend wording of Checklist in Annex to reflect wording of Regulation 16(5) of S.I. No. 684 of 2007. Inclusion of unique point code for each point of discharge and storm water overflow.	To accurately reflect the information required To accurately reflect the Regulations and to obtain the application documentation in appropriate format. To aid in cross-referencing of application documentation.
V.4	18/04/08	Inclusion of requirement to provide name of agglomeration to which the application relates. Amend wording of Section B.7. (iii) to reflect the title of Water Services Authority. Addition of new Section B.9 (ii) in order to obtain information on developments yet to contribute to the waste 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 within the works.	To accurately determine the agglomeration to be licensed. To accurately reflect the Water Services Act, 2007. To obtain accurate population equivalent figures for the agglomeration. To obtain accurate information on design and spill frequency from these structures. To acquire information

		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 on composite sampling/flow monitoring provisions.	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 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 Directive.	To accurately reflect the Water Services Act, 2007 requirements.
V.6	26/08/2008	Amendments to Section D to reflect new web based reporting. Amended requirements for reporting on discharges under E.1 Waste Water Discharge Frequency and Quantities. Amendment to Section F.1 to specify the type of monitoring and reporting required for the background environment. Removal of Annexes to application form.	To clarify the reporting requirements. To streamline reporting requirements. To clarify the reporting requirements for ambient monitoring. To reflect the new web based reporting requirements.
V.7	14/05/2012	Amendments to Section B.6 and Section F.1 to take account of the requirements of European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) in terms of Appropriate Assessment under Article 6(3) of the Habitats Directive (92/43/EEC). Update references to new legislation	To accurately reflect the Habitats Regulations 2011 (S.I. No. 477 of 2011) requirements. To reflect changes in legislation

Environmental Protection Agency

Application for a Waste Water Discharge Licence
Waste Water Discharge (Authorisation) Regulations 2007, as amended.

CONTENTS

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 as amended, or for the review of an existing Waste Water Discharge licence.

The Application Form **must** 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 as amended. 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 Checklist 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 as amended. While every effort has been made to ensure the accuracy of the material contained in the Application Form, the EPA assumes no responsibility and gives no guarantee, or warranty concerning the accuracy, completeness or up-to-date nature of the information provided herein and does not accept any liability whatsoever arising from any errors or omissions.

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

PROCEDURES

The procedure for making and processing of applications for waste water discharge licences, and for the processing of reviews of such licences, appear in the Waste Water Discharge (Authorisation) Regulations, 2007 as amended, and is summarised below. The application fees that shall accompany an application are listed in the Third Schedule to the Regulations.

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

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

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 as amended.

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

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

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

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.

Waste Water Works and Activities Carried Out Therein

Existing Situation

The existing wastewater treatment plant in Courtmacsherry consists of a septic tank located in the village centre near Courtmacsherry Pier. The septic tank discharges to the Argideen Estuary. The treatment system was constructed in the mid-eighties and is inadequate to meet the current needs of the village. The design parameters for the septic tank were 500 p.e. and 5.5 hours detention for 3 times dry weather flow (DWF) with retention time of 12 hours for average flows.
The Courtmacsherry sewer is a combined system and a storm overflow facility exists at the entrance manhole to the septic tank. This screened overflow bypasses the septic tank and discharges through the same outfall. There is also a secondary discharge from a septic tank at St. Joseph's Estate on the west side of Courtmacsherry village, into the estuary.

At present there is no waste water treatment in Timoleague. Wastewater from the village discharges directly to the Argideen Estuary at five locations (secondary discharges) detailed below. The sewer system in Timoleague is mainly drained via a combined sewerage system. A new separate foul sewer was constructed recently in Chapel Hill.
All existing discharges are listed below.

Proposed Sewerage Scheme Upgrade

The joint upgrading of Courtmacsherry and Timoleague Sewerage Schemes is scheduled for completion by end of 2018. It is proposed to construct a new waste water treatment plant to cater for a p.e. load of 2,500 which will discharge via the existing septic tank discharge outfall location in Courtmacsherry (SW1). The waste water treatment plant will be constructed as part of a DBO bundle of schemes. The chosen contractor will then design and build over 1 year and operate the plant for seven years.

The existing septic tank in Courtmacsherry shall be converted into a new pumping station, referred to as Harbour PS, and will deliver Formula A flows to the WwTP, with a built in stormwater overflow (SW2, discharge at same location as new & existing primary discharge) ensuring that spills do not exceed 7 times in 1 year.
The current septic tank at St Joseph's estate will be decommissioned and the wastewater directed to the Harbour Court Pumping Station. A new Stormwater overflow will be built at this P.S. (SW4).

The existing Lodge pumping station (PS) adjacent to the Courtmacsherry Hotel will be upgraded to accommodate future development on the eastern side of the village. A new storm overflow (SW3) will be built here with spill incidences to the Bay limited to a maximum of seven in number per annum.

A new collector sewer will be constructed in Timoleague to collect and transfer flows from the Timoleague catchment to a new Timoleague Pumping Station and to enable removal of 5 no. existing raw sewer outfalls, which currently spill to the Argideen Estuary, from the existing wastewater collection network. A new stormwater overflow will be built into this Timoleague Pumping Station (SW5).

Sources of Emissions from the Waste Water Works

The most significant loading in terms of quantity is the domestic population generated load which varies significantly due to local tourism. The current peak summer loading population equivalent (p.e.) for the combined agglomerations of Timoleague and Courtmacsherry is 1,490 p.e. including the non-domestic contributions. The projected year 2022 peak summer loading for the combined agglomeration of Timoleague and Courtmacsherry is 1,557 p.e., based on a growth rate of 0.644%[1] per annum for six years, i.e. the agglomeration population equivalent is in the range 1,001-2,000 p.e..

[1] Based on ESRI County Growth Rate Estimates

Identification of significant effects of the emissions on the environment

The effluent discharges from the wastewater works flow directly into the Courtmacsherry Estuary SAC and the Courtmacsherry Bay SPA. The current Transitional Waterbody WFD Status 2010-2012 of the Estuary is poor and the wastewater works discharges are having a negative impact on water quality.

The new WwTP, to cater for effluent discharges for Courtmacsherry and Timoleague, will be designed to operate in compliance with existing legislative and regulatory standards. This will improve the water quality of the Argideen Estuary/Courtmacsherry Harbour and help to protect the Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA.

Code	Type	EASTING	NORTHING	Location
SW1*	Existing & Primary Discharge Pt. (existing & proposed)	150732	042818	Into Argideen Estuary, 280m w of Courtmacsherry Hbr
SW2*	Existing & Proposed SWO	150732	042818	From new Harbour P.S (old Harbour Septic tank)
SW3 & EO1	Proposed SWO & existing Emergency Overflow	151498	042565	From Lodge P.S. near Courtmacsherry Hotel
SW4	Proposed SWO	150038	042674	Harbour Court P.S.
SW5	Proposed SWO	147090	043460	From new Timoleague P.S.
SW6	Secondary Discharge Pt.	150106	042711	From St. Joseph's septic tank into Argideen Estuary
SW7	Secondary Discharge Pt	147200	043523	Abbey Bridge, Timoleague
SW8	Secondary Discharge Pt	147132	043496	School Road, Timoleague
SW9	Secondary Discharge Pt	147141	043507	West of Abbey Bridge, Timoleague
SW10	Secondary Discharge Pt	147209	043702	Timoleague Abbey.
SW11	Secondary Discharge Pt	147176	043789	Church Bridge, Timoleague

*SW1 and SW2 share the same outfall location. **SWO** = Storm Water Overflow

All Secondary discharges and the existing Emergency Overflow will be decommissioned on construction of new plant

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

The new WwTP will provide secondary treatment and be designed to comply with the Urban Wastewater Treatment Regulations for the existing and foreseeable future p.e..
As part of the major upgrade, the untreated discharges from Courtmacsherry and Timoleague into the Argideen Estuary will be discontinued. Stormwater overflows will be compliant with the DoEHLG *Procedures and Criteria in Relation to Storm Water Overflows*. The wastewater network will also be rehabilitated resulting in better performance of the collection system. Detailed design is not available yet.

Measures planned to comply with the general principle of the basic obligations of the operator

Under the DBO contract for the new WwTP, a Performance Management System will be required. The contractor will be required to comply with Irish Water Standards including procedures for dealing with plant operation, and in particular for dealing with emergencies or failure to meet treated effluent standards. Failure to meet the specified treated effluent standards may result in final penalties to the operating contractor. As a result, the risk of environmental pollution from the treatment plant should be reduced.

Measures planned to monitor emissions into the environment

The DBO Contractor/Irish Water will monitor the wastewater treatment plant assets and operations, which includes undertaking sampling, safe access, monitoring and analysis of the wastewater and sludge.

Sampling and monitoring points for the Primary Discharge are listed below and illustrated in Attachments B2 (i) and (ii).
Ambient monitoring is not carried out by Irish Water. There are nine operational EPA monitoring stations within Courtmacsherry Estuary which provide ambient data as shown in Attachment E.2(ii). Two of these are listed below. It is proposed to continue ambient monitoring at the upstream locations on the River Argideen (Inchy Bridge) and River Spital (Spital Bridge).
Historic monitoring locations are illustrated in Attachments E.2(i).

Monitoring Locations

Type of Point	Location	Easting 6E	Northing 6N
Primary Discharge Influent (ISW1)	Lodge Pumping Station	151486E	042471N
Primary Discharge Effluent Sampling	Main Septic Tank	150566E	042741N

(ESW1)			
Proposed Influent p(ISW1)	At New WwTP	149752	042270
Proposed Effluent p(ESW1)	At New WwTP	149744	042326
[Upstream EPA] WFD Monitoring Station TW05003171AR1002	At Timoleague, River Argideen	147205	043811
[Downstream EPA] Transitional WFD Monitoring Station TW05003171AR1009	Courtmacsherry beach	151707	042994
Upstream aSW1u1	Inchy Bridge, River Argideen	146486	045753
Upstream aSW1u2	Spital Bridge, River Spital	146835	042533

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

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

SECTION B: GENERAL

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

B.1 Agglomeration Details

Name of Agglomeration:	Courtmacsherry and Timoleague

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 clearly marked in red ink.

Name*:	Irish Water
Address:	Colvill House
	24-26 Talbot Street
	Dublin 1
Tel:	353 1 89 25000
Fax:	353 1 89 25001
e-mail:	WasteWaterLicensingSouthern@water.ie

*This should be the name of the water services authority in whose ownership or control the waste water works is vested.

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

Name*:	Ken Conroy
Address:	Colvill House
	24-26 Talbot Street
	Dublin 1
Tel:	353 1 89 25000
Fax:	353 1 89 25001
e-mail:	WasteWaterLicensingSouthern@water.ie

*This should be the name of person nominated by the water services authority for the purposes of the application.

Co-Applicant's Details

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

*This should be the name of a water services authority, other than the lead authority, where multiple authorities are the subject of a waste water discharge (authorisation) licence application.

Design, Build & Operate Contractor Details

Name*:	Not available at this time, contract at tender stage.
Address:	
Tel:	
Fax:	
e-mail:	

*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.

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

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

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

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

Existing WWTP

Name*:	Valerie Harmon
Address:	Irish Water
	Colvill House
	24-26 Talbot Street
	Dublin 1
Grid ref (6E, 6N)	E150569 N042742
Level of Treatment	Primary
Primary Telephone:	353 1 89 25000
Fax:	353 1 89 25001
e-mail:	WasteWaterComplianceSouthern@water.ie

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

Proposed WWTP

Name*:	Irish Water DBO Lead [contract at tender stage]
Address:	Greenfield site 0.25 km to the west of the village and 0.5 km to the east of Ballynamona House
	Courtmacsherry
	Co. Cork
Grid ref (6E, 6N)	E149734 N042270
Level of Treatment	Secondary
Primary Telephone:	01-8925000
Fax:	01-8925001
e-mail:	WasteWaterComplianceSouthern@water.ie

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

Attachment included	Yes	No
	√	

B.3 Location of Primary Discharge Point

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

Existing

Type of Discharge	Non-return flap valve.
Unique Point Code	SW1
Location	Courtmacsherry Harbour
Grid ref (6E, 6N)	150732E 042818 N

Proposed*

Type of Discharge	Detailed design not completed
Unique Point Code	SW1
Location	Courtmacsherry Harbour
Grid ref (6E, 6N)	150732E 042818 N

*Note: Existing and Proposed Primary Discharge points are at the same location.

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

drawings and tabular data requested in sections B.1, B.2, B.4, B.5, C.1, D.2, E.3 and F.2.

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

B.4 Location of Secondary Discharge Point(s)

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

Type of Discharge	Open Pipe
Unique Point Code	SW6
Location	From St. Joseph's septic tank into Argideen Estuary
Grid ref (6E, 6N)	150106E 042711N

Type of Discharge	Open Pipe
Unique Point Code	SW7
Location	Abbey Bridge, Timoleague
Grid ref (6E, 6N)	147200E 043523N

Type of Discharge	Open Pipe
Unique Point Code	SW8
Location	School Road, Timoleague
Grid ref (6E, 6N)	147132E 043496N

Type of Discharge	Open Pipe
Unique Point Code	SW9
Location	West of Abbey Bridge, Timoleague
Grid ref (6E, 6N)	147141E 043507N

Type of Discharge	Open Pipe
Unique Point Code	SW10
Location	Timoleague Abbey
Grid ref (6E, 6N)	147209E 043702N

Type of Discharge	Open Pipe
Unique Point Code	SW11
Location	Church Bridge, Timoleague
Grid ref (6E, 6N)	147176E 043789N

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

Attachment included	Yes	No
	√	

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

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

Septic Tank and Proposed Harbour Pump Station Storm Overflow

Type of Discharge	Diffuser
Unique Point Code	SW2
Location	From new Harbour P.S (old Harbour Septic tank)
Grid ref (6E, 6N)	150732E 042818N

Lodge Pump Station Storm Water Overflow

Type of Discharge	Flap Valve
Unique Point Code	SW3
Location	From Lodge P.S. near Courtmacsherry Hotel
Grid ref (6E, 6N)	151498E 042565N

Proposed Storm Water Overflow

Type of Discharge	Detailed design not yet completed
Unique Point Code	SW4
Location	Harbour Court P.S.
Grid ref (6E, 6N)	150038E 042674N

Proposed Storm Water Overflow

Type of Discharge	Detailed design not yet completed
Unique Point Code	SW5
Location	From new Timoleague P.S
Grid ref (6E, 6N)	147090, 043460

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

Attachment included	Yes	No
	√	

B.6 Planning Authority and/or Public Authority

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

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

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

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

Local Authority Planning File Reference Nº:	16/00400

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

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

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

B.7 Other Authorities

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

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

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

Within the SFADCo Area	**Yes**	**No**
		√

B.7 (ii) Health Services Executive Region

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

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

B.7 (iii) Other Relevant Water Services Authorities

Regulation 13 of the Waste Water Discharge (Authorisation) Regulations, 2007 as amended, requires all applicants, not being the water services 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, to notify the relevant water services authority of the said application.

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

Relevant Authority Notified	**Yes**	**No**
		√

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

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

B.8 Notices and Advertisements

Regulations 10 and 11 of the Waste Water Discharge (Authorisation) Regulations, 2007 as amended, 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.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	1,490
Data Compiled (Year)	2016
Method	See below

The p.e. for Courtmacsherry Timoleague was calculated from the CSO 2011 population data with the addition of the Commercial/Institutional p.e. and a non-domestic factor of 10%. As Courtmacsherry is a touristic area, a tourist occupancy rate was applied to the CSO values. Growth rates were applied to 2011 values at 0.644%. There is a large processing factory in Courtmacsherry but it has its own Section 4-licensed discharge to the River Spital. There are no other industrial inputs within the agglomeration.

B.9 (ii) Pending Development

Where planning permission has been granted for development(s), but development has not been commenced or completed to date, within the boundary of the agglomeration and this development is being, or is to be, served by the waste water works provide the following information;

- information on the calculated population equivalent (p.e.) to be contributed to the waste water works as a result of those planning permissions granted,
- the percentage of the projected p.e. to be contributed by the non-domestic activities, and
- the ability of the waste water works to accommodate this extra hydraulic and organic loading without posing an environmental risk to the receiving water habitat.

The 2022 p.e. for Courtmacsherry Timoleague is estimated to be 1,557 based on a projected annual growth rate of 0.644%

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, as amended.

Class of waste water discharge	Fee (in €)
Discharges from agglomeration with a population equivalent of 1,001 to 2,000.	€15,000

The Agency retained €15,000 from the previous application fees for Courtmacsherry and Timoleague Correspondence confirming the above payment arrangement is appended to Attachment B.9 (iii).

Appropriate Fee Included	Yes	No
		√

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.

Capital investment has been committed to the following improvement programme for Courtmacsherry Timoleague:
It is planned to construct a new waste water treatment plant on a greenfield site 0.25 km to the west of the village that will serve the village of Courtmacsherry and Timoleague. The waste water treatment plant will comply with the E.U. Urban Waste Water Treatment Directive Standards and be designed for a p.e. load of 2,500.

The upgraded WwTP discharge will remain at the existing outfall point. The untreated discharges will be removed and all wastewater from the Courtmacsherry Timoleague agglomeration will be conveyed to the new WwTP. New storm water overflows will be compliant with the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows*', 1995.

Detailed design of the proposed treatment plant has not yet been carried out. A typical plant would consist of screening, aeration, settlement with sludge return and sludge treatment and removal and will include storm water storage on the network.

The upgraded works are planned to be completed by end of 2018.

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	Yes	No
		√

B.11 Significant Correspondence

Provide a summary of any correspondence resulting from a Section 63 notice issued by the Agency in relation to the waste water works under the Environmental Protection Agency Acts, 1992 to 2011.

Attachment B.11 should contain a summary of any relevant correspondence issued in relation to a Section 63 notice.

Attachment included	Yes	No
		√

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.

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
		√

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 Waste Water Treatment Plant

The existing wastewater treatment plant in Courtmacsherry consists of a septic tank located in the village centre on the coastal side of the street and approximately 280 metres west of Courtmacsherry Pier. This treats the sewage from the domestic and non-domestic flows of the village and environs and discharges from its storage chamber on a lunar cycle to the tidal channel 172 metres to the north-east in Courtmacherry Harbour.

The main collection system and septic tank were constructed in the mid-eighties. The design parameters for the septic tank were 500 p.e. and 5.5 hours detention for 3 times dry weather flow (DWF) with retention time of 12 hours for average flows. A storm overflow facility exists at the entrance manhole to the septic tank. This screened overflow bypasses septic tank and discharges through the same outfall as the primary discharge.

The septic tank is desludged at least on a yearly basis with the sludge disposed off in accordance with the relevant Sludge Regulations.

At the western end of the village St. Joseph's Place estate, consisting of 15 houses, has its own septic tank as due to ground topography it could not gravitate to the main Courtmacsherry septic tank. This small tank discharges to the low water channel of the estuary.
This is the only secondary discharge in Courtmacsherry:

- **SW6 St Joseph's Estate**

There is no treatment in Timoleague village. The sewer system is mainly combined. A new separate foul sewer was constructed recently in Chapel Hill. There are five untreated secondary discharges from Timoleague:

- **SW7 Abbey Bridge**
  This 720mm diameter outfall discharges directly to the river at Abbey Bridge immediately north of the school. This is the main outfall of the village and serves the Abbey Street, Mill Street, parts of Main Street and Chapel Hill / Chapel Avenue areas.
- **SW8 School Road**
  This 150mm diameter outfall discharges into estuary south of Abbey Bridge. The School Road and southern part of the village are connect to this outfall.
- **SW9 West of Abbey Bridge**
  This 100mm diameter outfall discharges to estuary north of SW2 adjacent to the school. The School connects into this outfall.
- **SW10, North of Timoleague Abbey**
  This 150mm diameter outfall also discharges to the estuary in between Abbey Bridge and Church Bridge adjacent to Timoleague Abbey. This outfall serves the properties to the rear of Abbey Street and those in 'Abbeyside'.

- **SW11, South of Church Bridge**
  This outfall is located just south of Church Bridge. The outfall serves the properties on Church Road.

Proposed Waste Water Treatment Plant

It is proposed to construct a new waste water treatment plant on a greenfield site 0.25 km to the west of the village and 0.5 km to the east of Ballynamona House. The waste water treatment plant will be phased to cater for a p.e. load of 2,500. Approx. 1.2km of 355mm new outfall pipeline will be constructed at the WwTP to the existing septic tank discharge outfall in Courtmacsherry (SW1).

The new WwTP is proposed to commence construction in Quarter 1 2017 and will take approximately a year to complete.

Detailed design of the proposed treatment plant has not yet been carried out but it will provide Appropriate Treatment in accordance with the Urban Waste Water Treatment Directive, and meet the following discharge specifications:

- BOD 25mg/l
- COD 125mg/l
- Total Suspended Solids 35mg/l

The existing septic tank in Courtmacsherry shall be converted into a new pumping station, referred to as Harbour PS, and will deliver Formula A flows to the WwTP, via a 1.0 km rising main with a built in stormwater overflow (SW2, discharge at same location as new & existing primary discharge) ensuring that spills do not exceed 7 times in 1 year.
The current septic tank at St. Joseph's Estate will be decommissioned and the wastewater directed to the Harbour Court Pumping Station. A new Stormwater overflow will be built at this P.S. (SW4).
A new collector sewer will be constructed in Timoleague to collect and transfer flows from the Timoleague catchment to a new Timoleague Pumping Station and to enable removal of 5 no. existing raw sewer outfalls, which currently spill to the Argideen Estuary, from the existing wastewater collection network. A new stormwater overflow will be built into this Timoleague Pumping Station (SW5).

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.

Currently there is one storm water overflow within the Courtmacsherry Timoleague agglomeration which is located in Courtmacsherry.

1. SW2: The Harbour septic tank has a storm water overflow which bypasses the tank when flows exceed 3DWF of the design capacity. However as the septic tank is significantly overloaded during Summer peak season, this SWO is not in compliance with the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows*', 1995.

A drawing of this storm water overflow is in Attachment C.1(ii).

After the sewerage scheme upgrade works there will be four storm water overflows within the combined agglomeration as flows:

1. SW2: The Harbour septic tank will be decommissioned and replaced with a pumping station and a storm water overflow will be built in which discharges at the same location as the existing Harbour septic tank SWO.
2. SW3: The Lodge Pumping Station Emergency Overflow will be converted into a SWO as part of the upgrading of this pumping station.
3. SW4: Harbour Court Housing Estate pumping station will have a new SWO. St Joseph's Estate wastewater will be piped to Harbour Court P.S. and its septic tank will be decommissioned.
4. SW5: The new pumping station in Timoleague village will have a new SWO.

All of the new storm water overflows will be compliant with the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows*', 1995.

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.

Existing Pumping Stations

Currently there are two existing pumping stations within the Courtmacsherry Timoleague agglomeration. Both are located in Courtmacsherry.

Courtmacsherry Pump Station 1 - Lodge PS

The Lodge Pumping Station is located at the eastern end of the village, immediately west of Courtmacsherry Hotel. The pump station serves the eastern end of the village, namely Meadowlands, the Caravan Park and Courtmacsherry Hotel.

The pumping station lifts foul sewage, to the head of the main 300mm diameter gravity sewer at Manhole No. 5142 2402, which is located at the junction of Ramsey

Hill and Main Street. This gravity sewer runs westwards for some 770m length before connecting into the Septic Tank.
This Pumping Station has a 225mm diameter concrete high-level emergency overflow, which discharges directly into the Courtmacsherry Harbour in the event that both pumps fail to operate. This emergency overflow (EO1) ensures that the catchment is protected from flooding during pump failure. Model analysis shows that this pumping station is operating satisfactorily. No overflow incidences were recorded during the Flow Survey.
The pumping station wet well comprises a submersible pump sump. The chamber is covered with hinged cover plates and the electrical power distribution and controls are housed in an overground kiosk. The kiosk is sited on the seawall west of Courtmacsherry Hotel.
There is dry run protection on the pumps. The pumping station consists of 2 No. submersible pumps.

- Pump 1 was replaced in late August 1999. Pump 1 is an EMU submersible pump, type FA08.52-185U+T171-4/8/S/N:542408 of cast iron construction with stainless steel shaft and screwed parts, fitted with a vortex impeller capable of handling 80mm solids coupled to a 2.5KW motor with thermostats and 10m of cable. The electrical supply is 400-3-50.
- Pump 2 was replaced in May 2000. Pump 2 is a KSB Amarex submersible pump, type F80-210/024UG-190.

The two pumps operate as duty / standby each capable of delivering 340 litres per minute (5.6 l/sec.) via a 100mm diameter rising main against a static head metres. The length of the rising main is approximately 240 metres. The delivery pipe work for the rising main is terminated in flanged and plain- ended pipes.

Pump Station 2 - Harbour Court Pump Station

In 1999 John Fleming Construction Ltd. built 42 No. houses at the west end of Courtmacsherry as part of a development known as Harbour Court. A pumping station serves this development discharging to public sewer. It also serves a subsequent adjoining development of 37 houses to west which has its own waste water treatment plant.
The sewage from the Harbour Court development is pumped to the head of the public gravity sewer. The gravity sewer is a 225mm diameter pipeline, which runs eastwards before terminating at the Septic Tank. It is proposed to connect the sewer from 15 houses in St. Joseph's Place to this pump station also thereby allowing decommissioning of septic tank serving that development.
The pumping station consists of 2 No. submersible sewage pumps in cast iron construction. The two pumps operate as duty / standby. The pump(s) have a capacity of 3.5 l/sec. and the static head is approximately 7 metres. The electrical supply is 400-3-50.
The pumping station is constructed of 1200mm diameter precast concrete rings, 2.8m deep overall approximately. There is no emergency overflow from this P.S. The rising main is 80mm internal diameter Class C HDPE, which discharges into the existing public foul manhole, (in front of St. Joseph's Place / Church) which is located approximately 185m east of the Harbour Court development.

Proposed Pumping Stations

As part of the upgrade works two new pumping stations will be built, one in Timoleague village and one to replace the existing Courtmacsherry septic tank.
Detailed specifications are not available for the pumping stations at this time. Storm water overflows associated with the pumping stations are listed above. Discharges (i.e. storm water overflows) associated with the new pumping stations are listed in Section C.1.1.

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**
	√	

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.

The existing Septic/Holding Tank discharges on a lunar cycle to Courtmacsherry Harbour via a 300mm diameter sea outfall. The outfall pipe is approximately 170 metres long. The new WwTP will discharge via the existing outfall.

A drawing of the primary outfall and associated stormwater overflow is in Attachment C.1 (ii).

The secondary discharge from the septic tank serving St. Joseph's Place discharges at the shoreline at the western end of the village. The discharge is through an open 180 mm pipe. It is proposed that the effluent from this estate will be connected to the Harbour Court pumping station facilitating the removal of this outfall discharge.

The Timoleague secondary discharges are all open pipe outfalls as detailed in section C.1 above. These will all cease once the new Ww TP is completed.

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

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

SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT

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

Give particulars of the source, location, nature, composition, quantity, level and rate of discharges arising from the agglomeration and, where relevant, the period or periods during which such 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: http://epa.corasystems.com/EPA_WWD. ***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 following web based link: http://epa.corasystems.com/EPA_WWD. 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**
	√	

D.2 Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

Table D.2:

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING	VERIFIED
SW1	Primary Discharge	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	150732	042818	N
SW2	Secondary Discharge	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	150732	042818	N
SW3	Proposed SWO	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	151498	042565	N
SW4	Proposed SWO	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	150038	042674	N
SW5	Proposed SWO	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	147090	043460	N
SW6	Secondary Discharge	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	150106	042711	N
SW7	Secondary Discharge	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	147200	043523	N
SW8	Secondary Discharge	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	147132	043496	N
SW9	Secondary Discharge	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	147141	043507	N
SW10	Secondary Discharge	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	147209	043702	N
SW11	Secondary Discharge	Cork Co Co	Transitional	Argideen Estuary	pNHA, cSAC	147176	043789	N

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

SECTION E: MONITORING

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

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

Provide an estimation of the quantity of waste water likely to be emitted in relation to all primary and secondary discharge points applied for. This information should be included in Table E.1(i) via the following web based link: **http://epa.corasystems.com/EPA_WWD**.

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: **http://epa.corasystems.com/EPA_WWD.**

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.

No composite sampling or continuous flow monitoring is in place at present on any of the discharge points. Sampling facilities and continuous flow meters will be provided when new Waste Water Treatment Plant is in place with likely timeframe for completion of works to be end 2018.

E.2. Monitoring and Sampling Points

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

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

In determining the sampling programme to be carried out, the variability of the 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.

Grab samples were last collected of the effluent from the primary discharge, secondary discharges and receiving waters in 2008-2009. The results are included in Attachments D.1 and F.1 of this application.

Influent from Courtmacsherry was taken from the Lodge Pumping Station. Effluent was sampled from the Courtmacsherry septic tank.

As the discharge is to estuarine waters, upstream and downstream monitoring locations are not strictly applicable, but sampling of the two rivers that enter the Argideen Estuary (Argideen and Spital), and of the receiving waters at the opposite side of the estuary at Burren Rock were carried out and give an indication of background water quality.

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

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

It is proposed to sample the effluent from Courtmacsherry where accessible and receiving waters once a year until the upgrade is complete, for the following parameters:

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

When the proposed WwTP for Courtmacsherry Timoleague is constructed it will be operated under a Design, Build & Operate contract. A comprehensive monitoring and sampling programme will be undertaken by the contractor in accordance with the relevant standards and frequencies as set out by the Irish Water and to comply with the WWDL.

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

E.3. Tabular data on Monitoring and Sampling Points

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

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

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
ESW1	Primary Effluent	S	150566	042741	N
ISW1	Primary Influent	S	151486	042471	N
P(ESW1)	Proposed Primary Effluent	S	149744	042326	N
P(ISW1)	Proposed Primary Influent	S	149752	042270	N
aSW1u1 Argideen	Upstream	S/M	146486	045753	N
aSW1u2 Spital	Upstream	S/M	146835	042533	N
Burren Rock	Ambient/"downstream"	S/M	150649	043103	N

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

E.4 Sampling Data

Regulation 16(1) (h) of the Waste Water Discharge (Authorisation) Regulations 2007 as amended 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)(l) of the regulations requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

There is currently no effluent monitoring at Courtmacsherry or Timoleague. The most recent data is presented in Attachment D.1 and F.1. As the p.e. is <2,000, a sampling frequency is not specified in Schedule 5 of the Regulations however it is proposed to take an annual sample until the upgraded WwTP is completed. As the Courtmacsherry septic tank is overloaded and there is no treatment in Timoleague it is considered that appropriate treatment is not being provided at this agglomeration.

Attachment E.4 should contain any supporting information.

Attachment included	Yes	No
		√

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

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

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

- 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.

The receiving waterbody of the effluent from the Courtmacsherry and Timoleague agglomeration is the Argideen Estuary/Courtmacsherry Harbour which flows into Courtmacsherry Bay. The effluent discharges from the agglomeration flow directly into the Courtmacsherry Estuary SAC.
Based on the 2010-2011 EPA monitoring data, the current water quality status of the Argideen Estuary is Eutrophic.
The current Transitional Waterbody WFD Status 2010-2012 of the Estuary is poor and the downstream Coastal Waters status is Moderate.

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

Please see Attachment F.1 (i)-(ii).

- 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.

There are six untreated secondary discharges from the combined villages of Courtmacsherry and Timoleague into the Argideen Estuary. These are not monitored but it is considered that they are having a negative impact on the water quality in Argideen Estuary/Courtmacsherry Harbour and contributing to the prevalence of opportunistic algae within this body of water.

- 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.

No discharges to groundwater take place in the agglomeration.

- 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.

Courtmacsherry Estuary into which the discharges take place is a Special Area of Conservation and a proposed National Heritage Area. The receiving waters are **not** designated as Bathing, Sensitive or Shellfish Waters.

- 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.

Samples from both Courtmacsherry and Timoleague discharges taken in 2009 have been examined and do not indicate the presence of Dangerous Substances. Limits of Detection during analysis for Tributyl tin, Mercury and Cadmium were greater then the MAC set in the Environmental Objectives Surface Water Regulations. There is an exception for Mercury from SW10 (secondary discharge) in Timoleague which exceeded the MAC of 0.07 ug/l with a result of 0.4 ug/l. However, as the source of the wastewater in Courtmacsherry and Timoleague is essentially domestic, it is not considered likely that concentrations of dangerous substances from the agglomeration will impair the environment. A desktop Priority Substances risk assessment can be carried out following completion of the new WwTP if necessary.

- 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.

Receiving waters are estuarine. No water abstraction points exist downstream of any discharge.

- Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on a European Site, as defined in Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011).

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

  In relation to the existing environment and impact of the discharge(s), a stage 2 appropriate assessment for the agglomeration was carried out and a Natura Impact Statement is included in Attachment F.1(iii). This report concluded that the discharges from the Courtmacsherry and Timoleague agglomeration, alone or in-combination with other plans and/or projects will not give rise to significant effects on the integrity of the Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA as long as the mitigation measures as listed are implemented in full.
  A new WwTP providing secondary treatment for the Courtmacsherry Timoleague agglomeration is planned for completion in 2018 as required by the mitigation measures.

- 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.**

See above

Attachment included	Yes	No
	√	

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

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

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

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

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

There are no drinking water abstraction points downstream of the discharges from Courtmacsherry agglomeration.

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).

All future upgrades, expansions and improvements to the wastewater treatment plant and agglomeration will ensure that the emissions from the agglomeration will comply with, and not result in the contravention of the following Directives:

Dangerous Substances Directives 2006/11/EC.

The effluent for the agglomeration of Courtmacsherry is mainly touristic and domestic; the industrial contribution can be considered as negligible. Screening analysis carried out in 2009 supports this assumption. For this reason, it can be assumed that any dangerous substances mentioned in the Environmental Objectives Surface Water Regulations S.I. 272 of 2009 will not be present in the discharge. The proposed new WwTP shall advance the level of control by increasing the level of sampling and monitoring. A desktop Priority Substances risk assessment can be carried out following completion of the new WwTP if necessary.

Water Framework Directive 2000/60/EC

Please refer to F.1(iii) for NIS completed.

Birds Directive 79/409/EEC

Please refer to F.1(iii) for NIS completed.

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

Not Applicable as there are no emissions to groundwater.

Drinking Water Directives 80/778/EEC

Not Applicable. The receiving water is estuarine. There are no abstraction points downstream of any discharge points from this agglomeration.

Urban Waste Water Treatment Directive 91/271/EEC

The treated effluent quality standard for the proposed Waste Water Treatment Plant will be Appropriate Treatment in accordance with the Urban Waste Water Treatment Directive, and meet the following discharge specifications :

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

Habitats Directive 92/43/EEC
Please refer to F.1(iii) for NIS completed.

Environmental Liabilities Directive 2004/35/EC
The operation of the existing WwTP and any future upgrades and/or improvements to the Courtmacherry and Timoleague wastewater treatment plant will ensure that the emissions from the agglomeration will comply with, and not result in the contravention of these Regulations.
It is likely that under the DBO contract for the proposed Courtmacsherry Wastewater Treatment Plant, a Performance Management System will be required. Such a system would provide a uniform approach to dealing with performance management issues including procedures for dealing with plant operation, and in particular for dealing with emergencies or failure to meet treated effluent standards. Failure to meet the specified treated effluent standards may result in final penalties to the operating contractor. As a result, the risk of environmental pollution from the treatment plant should be reduced.

Bathing Water Directive 76/160/EEC

There are a number of recreational beaches in Courtmacsherry. However there is no designated Bathing Water in the Estuary therefore the Bathing Water Directive monitoring is not undertaken here.

Shellfish Waters Directive {79/923/EEC).
Not applicable.

Attachment G.1 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	√	

G.2 Compliance with the European Communities Environmental Objectives (Surface Waters) Regulations 2009.

Provide details on a programme of improvements, including any water quality management plans or catchment management plans in place, to ensure that improvements of water quality required under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 are being achieved.

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

The upgrade works planned will remove all untreated wastewater discharges and provide secondary treatment that meets the standard required by the European Communities Environmental Objectives (Surface Waters) Regulations 2009 in the receiving waters. Please refer to Non-technical Summary and Section C for details.

Attachment included	Yes	No
		√

G.3 Impact Mitigation

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

The upgrade works planned will remove all untreated wastewater discharges and provide secondary treatment to the standard required by the Urban Waste Water Treatment Regulations 2001 as amended. Following the upgrade, Storm Water Overflows will comply with the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows*', 1995. The improvements should therefore prevent any significant environmental pollution in the receiving waters.

The upgrade works are at tender stage and are planned to be completed by end 2018.

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

Attachment included	Yes	No
	√	

G.4 Storm Water 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 as amended.

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.

All of the new storm water overflows planned as part of the upgrade will be compliant with the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows*', 1995.

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

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 as amended.

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

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

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

Signed by : _____ **Date :** 8/9/16
(On behalf of the organisation)

Print signature name: SEAN LAFFEY

Position in organisation: HEAD OF ASSET MANAGEMENT

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 as amended.

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

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

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

Lead Authority

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

Print signature name: _____

Position in organisation:_____

Co-Applicants

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

Print signature name: _____

Position in organisation:_____

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

Print signature name: _____

Position in organisation:_____

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

Annex I

Table of Contents of Attachments

Section	Sub-Section	Title
A	A.1	Area of Interest
B	B.1	Agglomeration Boundary
	B.2 (i)	Location of Existing WWTP (Courtmacsherry)
	B.2(ii)	Location of Proposed WWTP (Courtmacsherry–Timoleague)
	B.3	Location of Primary Discharge Point
	B.4	Secondary Discharge Locations
	B.5	SWO Locations
	B.6	Planning Application Receipt
	B.8	Site Notice and Newspaper Notification
	B.8(i)	Site Notice Location Timoleague
	B.8(ii)	Site Notice Location Courtmacsherry
C	C.1(i)	Network Schematic – existing & proposed
	C.1(ii)	Septic Tank Outfall and SWO
	C.1.2	Emergency Overflow Locations
D	D.1	Discharges to Surface Waters
E	E.1	Waste Water Discharge Frequency and Quantities
	E.2 (i)	Historic Ambient Monitoring locations
	E.2 (ii)	EPA Ambient Monitoring Locations
	E.2 (iii)	Proposed Ambient Monitoring Locations
F	F.1(i)-(iii)	Receiving Waters Data
	F.1(iii)	Natura Impact Statement

Attachment A.1 Area of Interest

AREA OF INTEREST

Courtmacsherry Bay
Bá Chúirt Mhic Shéafraidh

CELTIC SEA

Coolmain Bay

Clonakilty Bay
Chloich na Coillte

Dunworly Bay

Seven Heads Bay

Broadstrand Bay

TIMOLEAGUE
Tigh Molaige

Kilbrittain
Cill Briotain

Courtmacsherry
Cúirt Mhic Shéafraidh

NOTES

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

NORTH

KEY MAP NTS

CORK

COURTMACSHERRY

No.	Date	Drwn	Chkd	Revision Description

Cork County Council, Western Division.

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

M. MURRELL.,
DIRECTOR OF SERVICES
WEST CORK

Job Title:
COURTMACSHERRY_WASTE_WATER DISCHARGE_LICENCE_APPLICATION

Drawing Title:
ATTACHMENT_A.1
SITE_LOCATION_MAP

Prepared By:	Checked By:	Date:
J.CREAGH	D.GROARKE	FEB.2009

Drawing number:	Scales:	Rev:
COUR_A1_01	1/50000	-

Attachment B.1 Agglomeration Boundary

150000

CLOONCALLA BEG
CLOONCALLA MORE
CASTLE UPPER
CASTLE LOWER
LISHEENALEEN
Ballyhinaragh
BURREN
Timoleague
TIMOLEAGUE
R600
ABBEYMAHON
CREGGANE
Hamilton's Row
Courtmacsherry
Proposed WWTP
CULLENAGH
BARRERAGH
MEELMANE
BALLYHUTCH
BALLYCARDEEN
BALLINCURRIG
CURRAHEEN
LISLEETEMPLE
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UISCE ÉIREANN : IRISH WATER

Legend

- Treatment plant
- IW Agglomeration Boundary

0 120 240 480 Meters

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale:	1:18,000 @ A3
Revision No.:	0
Attachment No.	B.1
Drawn By:	E.Laurinaviciute
Checked By:	M'OReilly
Approved By:	M'OReilly
Drawn Date	18/07/2016
Checked Date:	18/07/2016
Approved Date:	18/07/2016

Map Template Design: kcarroll@water.ie

Agglomeration Boundary
Courtmacsherry - Timoleague

Attachment B.2(i) Location of Existing WwTP (Courtmacsherry)

UISCE ÉIREANN : IRISH WATER

Legend

- Sampling Location
- Primary Discharge
- WTP Treatment plant
- IW Agglomeration Boundary

0 45 90 180 Meters

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale:	1:7,300 @ A3
Revision No.:	0
Attachment No.	B.2 (i)
Drawn By:	KS
Checked By:	M'OReilly
Approved By:	M'OReilly
Drawn Date	12/08/2016
Checked Date:	18/07/2016
Approved Date:	18/07/2016

DRAFT

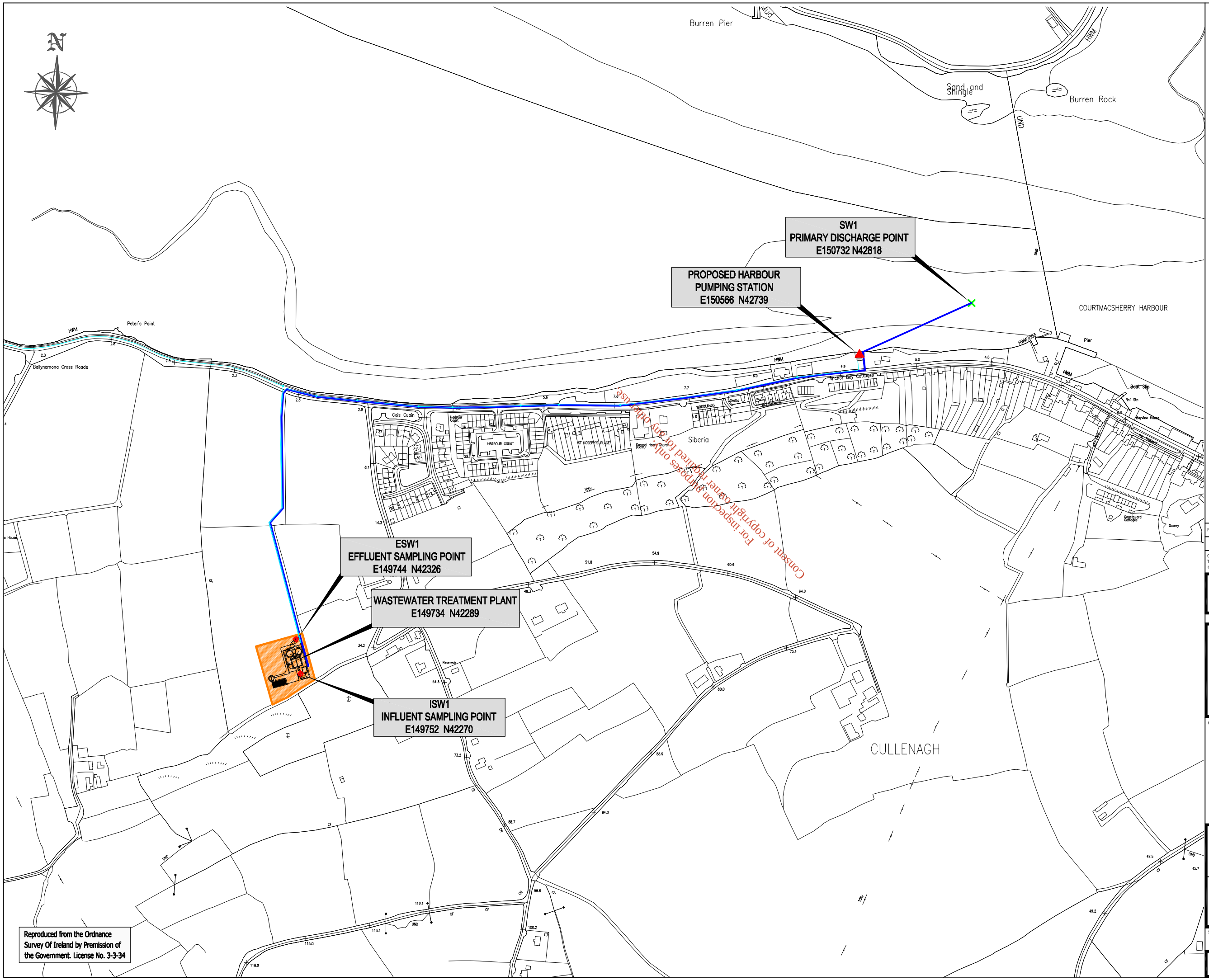
N

2. Whilst every care has been taken in its compilation, Irish Water gives this information as to the position of its underground network as a general guide only on the strict understanding that it is based on the best available information provided by each Local Authority in Ireland to Irish Water. Irish Water can assume no responsibility for and give no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided and does not accept any liability whatsoever arising from any errors or omissions.This information should not be relied upon in the event of excavations or any other works being carried out in the vicinity of the Irish Water underground network. The onus is on the parties carrying out excavations or any other works to ensure the exact location of the Irish Water underground network is identified prior to excavations or any other works being carried out. Service connection pipes are not generally shown but their presence should be anticipated.

Map Template Design: kcarroll@water.ie

Existing WWTP Location

Attachment B.2(ii) Location of Proposed WwTP (Courtmacsherry - Timoleague)



LEGEND

- PROPOSED WASTE WATER TREATMENT PLANT
- PROPOSED PUMPING STATION
- EFFLUENT PIPE
- PROPOSED RISING MAIN
- PSW1 — PRIMARY DISCHARGE POINT
- ISW1 — INFLUENT SAMPLING POINT
- ESW1 — EFFLUENT SAMPLING POINT

Whilst every care has been taken in its compilation Irish Water gives this information as to the position of its underground network as a general guide only on the strict understanding that it is based on the best available information provided by each Local Authority in Ireland to Irish Water. Irish Water can assume no responsibility for and give no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided and does not accept any liability whatsoever arising from any errors or omissions. This information should not be relied upon in the event of excavations or any other works being carried out in the vicinity of the Irish Water underground network. The onus is on the parties carrying out excavations or any other works to ensure the exact location of the Irish Water underground network is identified prior to excavations or any other works being carried out. Service connection pipes are not generally shown but their presence should be anticipated.

REV	DATE	DRN	DESCRIPTION	CHK	APD
A	July 2016	RB	Changes to text.	JR	PS

REVISIONS

DRAWING STATUS

- ☐ PRELIMINARY
- ☐ PLANNING
- ☒ FOR YOUR INFORMATION
- ☐ CONTRACT
- ☐ CONSTRUCTION
- ☐ AS CONSTRUCTED
- ☐ TENDER
- ☐ FOR APPROVAL
- ☐ DRAFT

RYAN HANLEY
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Taylor's Hill, Galway
Tel:(091)587116 Fax:(091)587110
Email: rhc@ryanhanley.ie
Web: www.ryanhanley.ie
DUBLIN OFFICE:170 IVY EXCHANGE, GRANBY PLACE, PARNELL SQUARE WEST, DUBLIN 1.

CLIENT

UISCE ÉIREANN : IRISH WATER

PROJECT

COURTMACSHERRY & TIMOLEAGUE WASTEWATER DISCHARGE LICENCE APPLICATION

TITLE

WWTP AND DISCHARGE OUTFALL LOCATION

SCALE @ A3	DATE	DRAWN	CHECKED	APPROVED
1:5,000	NOV 2014	KC	PS	PS

JOB No.	DRAWING No.	REV.
3024	C.2 - 11	A

Attachment B.3 Location of Primary Discharge Point

UISCE
ÉIREANN : IRISH
WATER

Legend

- Primary Discharge Point
- WTP Treatment plant
- IW Agglomeration Boundary

0 45 90 180 Meters

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale:	1:7,000 @ A3
Revision No.:	0
Attachment No.	B.3
Drawn By:	E.Laurinaviciute
Checked By:	M'OReilly
Approved By:	M'OReilly
Drawn Date	20/07/2016
Checked Date:	20/07/2016
Approved Date:	20/07/2016

N

Map Template Design: kcarroll@water.ie

Primary Discharge Location

Attachment B.4 Location of Secondary Discharge Points

150000

SW11 Church Br.: 147176E; 043789N

SW10 Timoleague Abbey: 147209E; 043702N

SW7 Abbey Bridge: 147200E; 043523N

SW8 School Road: 147132E; 043496N

SW9 Abbey Br. West: E147141; 043507N

SW6 St Joseph's Estate : 150106E; 042711N

WTP Anchor Bay Cottages

CASTLE UPPER

CLOONCALLA MORE

CASTLE LOWER

BURREN

Timoleague

TIMOLEAGUE

ABBEYMAHON

CREGGANE

BALLYNAMONA

CULLENAGH

BARRERAGH

UISCE ÉIREANN : IRISH WATER

Legend

- Secondary Discharge Point
- WTP Treatment plant
- IW Agglomeration Boundary

0 85 170 340 Meters

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

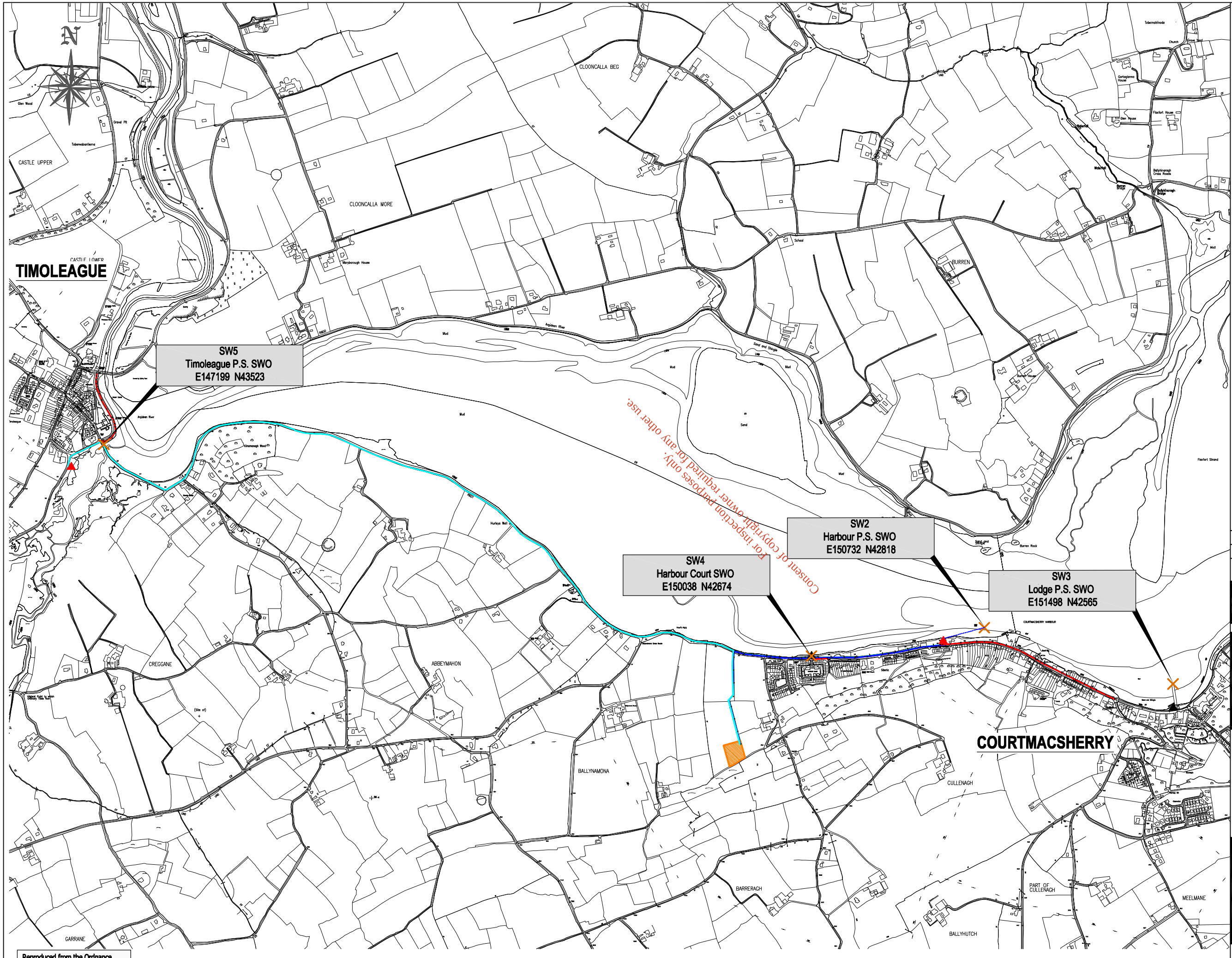
Scale:	1:13,000 @ A3
Revision No.:	0
Attachment No.	B.4
Drawn By:	E.Laurinaviciute
Checked By:	M'OReilly
Approved By:	M'OReilly
Drawn Date	15/07/2016
Checked Date:	15/07/2016
Approved Date:	15/07/2016

N

Map Template Design: kcarroll@water.ie

Secondary Discharge Points

Attachment B.5 Location of Storm Water Overflow Points



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LEGEND

- PROPOSED WASTEWATER TREATMENT PLANT
- EXISTING PUMPING STATION
- PROPOSED PUMPING STATION
- STORM WATER OVERFLOW POINT SWX
- EFFLUENT PIPE
- PROPOSED RISING MAIN

Whilst every care has been taken in its compilation Irish Water gives this information as to the position of its underground network as a general guide only on the strict understanding that it is based on the best available information provided by each Local Authority in Ireland to Irish Water. Irish Water can assume no responsibility for and give no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided and does not accept any liability whatsoever arising from any errors or omissions. This information should not be relied upon in the event of excavations or any other works being carried out in the vicinity of the Irish Water underground network. The onus is on the parties carrying out excavations or any other works to ensure the exact location of the Irish Water underground network is identified prior to excavations or any other works being carried out. Service connection pipes are not generally shown but their presence should be anticipated.

REV	DATE	DRN	DESCRIPTION	CHK	APD
A	July 2016	RB	Rising main added and SWO references amended.	JR	PS

REVISIONS

DRAWING STATUS

☐ PRELIMINARY	☐ CONTRACT	☐ TENDER
☐ PLANNING	☐ CONSTRUCTION	☐ FOR APPROVAL
☒ FOR YOUR INFORMATION	☐ AS CONSTRUCTED	☐ DRAFT

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Email: rhc@ryanhanley.ie
Web: www.ryanhanley.ie
DUBLIN OFFICE:170 IVY EXCHANGE, GRANBY PLACE, PARNELL SQUARE WEST, DUBLIN 1.

CLIENT: UISCE ÉIREANN : IRISH WATER

PROJECT
COURTMACSHERRY & TIMOLEAGUE WASTEWATER DISCHARGE LICENCE APPLICATION

TITLE
STORM WATER OVERFLOWS

SCALE @ A3	DATE	DRAWN	CHECKED	APPROVED
1:14,000	NOV 2014	KC	PS	PS

JOB No.	DRAWING No.	REV.
3024	B.5 - 09	A

Attachment B.6 Planning Application Receipt

Comhairle Contae Chorcaí
Cork County Council

Rannóg Pleanála, Teach Norton,
Bóthar Chorcaí, An Sciobairín,
Co. Chorcaí.
Fón: (028) 40340 • Faics (028) 21660
Suíomh Greasain: www.corkcoco.ie
Planning Section, Norton House,
Cork Road, Skibbereen,
Co. Cork.
Tel: (028) 40340 • Fax: (028) 21660
Web: www.corkcoco.ie

CD 643 11/7

Irish Water
C/O Ciarán Duignan
Nicholas O'Dwyer Consulting Engineers
Unit E4, Nutgrove Office Park
Nutgrove Avenue
Dublin 14

08/07/2016

A Chara,

I received your Planning Application on 27/06/2016 for **Permission** to carry out the following development:

A new Sewerage Scheme for Courtmacsherry and Timoleague. The proposed scheme will accept domestic and industrial sewage from the surrounding hinterland. The system will include: 1. the construction of a new 2,500pe Wastewater Treatment Plant (WwTP) at Cullenagh, Courtmacsherry. The development will contain an administration building, inlet works, rotating biological contactors, final settlement tanks, sludge pump stations, sludge thickening, storm tank, attenuation/infiltration tank, tertiary treatment, primary settlement tanks, outfall flume, flow distribution chambers, chemical storage area, access road, 2.4 meter high boundary fence and access gate, landscaping, and all associated site development and site excavation works above and below ground. 2. The construction of a new Pump Station at Timoleague to transfer flows to the proposed new WwTP in Cullenagh, Courtmacsherry. The development will contain a valve chamber and foul sump, a storm tank, control kiosk, chemical dosing unit, demountable lifting davit, flood protection works, 2.4 meter high boundary fence, access gate, hardstanding areas, landscaping, and all associated site development and site excavation works above and below ground. 3. The construction of a new Pump Station at Sea Road, Courtmacsherry to transfer flows to the proposed new WwTP in Cullenagh, Courtmacsherry. The proposed pump station will be constructed on the site of the existing septic tank and will contain a valve chamber and foul sump, a storm tank, control kiosk, lifting davit, 2.4 meter high boundary fence, access gate, hardstanding areas, landscaping, and all associated site development and site excavation works above and below ground. Demolition of the septic tank and associated building. 4. Demolition of the septic tank at St. Joseph's Place. 5. Provision of a sewer network within Timoleague and Courtmacsherry that includes gravity mains in Courtmacsherry and Timoleague Villages rising mains extending from the new pump stations to the WwTP at Cullenagh, Courtmacsherry and from the WwTP to the exiting outfall at the new pump station at Sea Road, Courtmacsherry. A Natura Impact Statement (NIS) has been prepared and will be submitted to the Planning Authority with the application.

AT: 1. Cullenagh, Courtmacsherry, 2. L-5046-1, Timolea, 3. Sea Road/R601, Courtmacsherry, 4. St. Joseph's Place, Courtmacsherry, 5. Sea Road/R601, R-601-31, L-5016-1, Timoleague,

Your application Register No. is **16/00400** which you should please quote in all future correspondence.

I wish to acknowledge receipt of bank transfer in the amount of €3302.40.

Please note that the validity of your application is subject to the site notice complying with the Planning and Development Regulations 2006 (as detailed on the site notice proper). An inspection of the site may be carried out within the required period for display of the site notice and in the event that the site notice does not comply your application will be declared INVALID and returned to you notwithstanding the fact that this acknowledgement has issued.

Yours faithfully,

Claire O'Donovan
Clerical Officer

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Google Play Store **App Store**

Attachment B.8 Site Notice and Newspaper Notification

PUBLIC NOTICE

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE WATER DISCHARGE LICENCE.

Pursuant to Regulations 9 of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007), as amended, Irish Water, Colvill House, 24-26 Talbot Street, Dublin 1, intend to apply to the Environmental Protection Agency for a Wastewater Discharge Licence for the Courtmacsherry Timoleague wastewater works. The existing wastewater works consists of two septic tanks, one primary discharge to the Argideen/Courtmacherry Estuary, six secondary discharges, two storm water overflows and two pumping station(s).

A new wastewater treatment plant is proposed on a greenfield site, 0.25 km to the west of the village and 0.5 km to the east of Ballynamona House in Courtmacsherry. The upgraded works will comprise the secondary treatment plant, extended sewers and new pumping station in Timoleague, a rising main transferring existing untreated wastewater for Timoleague to the new WWTP and a new pumping station in Courtmacsherry. Two existing secondary discharges will be replaced with two storm water overflows and four remaining secondary discharges will be removed. The primary discharge point will remain at the same location.

Details of the location of these works are as follows:

Waste Water Works Item	Location (townland)	National Grid Reference	
		Easting	Northing
Primary discharge (SW1)	Courtmacsherry	150732	042818
Stormwater overflow (SW2)	Courtmacsherry	150732	042818
Stormwater overflow (SW3)	Courtmacsherry	151498	042565
Stormwater overflow (SW4)*	Courtmacsherry	150038	042674
Stormwater overflow (SW5)*	Timoleague	147199	043523
Secondary discharge (SW6)	Courtmacsherry	150106	042711
Secondary discharge (SW7)	Timoleague	147200	043523
Secondary discharge (SW8)	Timoleague	147132	043496
Secondary discharge (SW9)	Timoleague	147141	043507
Secondary discharge (SW10)	Timoleague	147209	043702
Secondary discharge (SW11)	Timoleague	147176	043789

*Proposed discharge points

A copy of the application for a 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, will be made available as soon as is practicable after its receipt by the Agency, at www.epa.ie, or for inspection or purchase from the Environmental Protection Agency, at Irish Water, Colvill House, 24-26 Talbot Street, Dublin 1.and at Cork County Council, Courthouse, Skibbereen, Co. Cork.

Submissions pertaining to the application can be made to the Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Telephone 053 9160600.

Negligence probe over Italy quake death toll

■ Call to ensure mafia does not infiltrate construction contracts

Vanessa Gera
Amatrice

Italian authorities are vowing to investigate whether negligence or fraud in adhering to building codes played a role in the high death toll in last week's earthquake.

They also called for efforts to ensure organised crime does not infiltrate lucrative construction contracts to eventually rebuild much of the picturesque towns levelled in the disaster.

Meanwhile, rescue workers pressed on with the task of recovering bodies from the rubble, with hopes of finding any more survivors virtually vanishing.

Over the past three days, they found six more bodies in the rubble of Hotel Roma in Amatrice, the medieval hill town in mountainous central Italy that bore the brunt of destruction and loss of life in the powerful quake. They recovered three and were still working to retrieve others.

It was not clear if those six were included in the overall 290 death toll given by officials. The Civil Protection agency, which combines the figures it receives from different provinces affected by the quake, said the number is lower than the previous toll of 291 dead due to a correction in the numbers from the province of Rieti, where most of the victims died.

The quake that struck before dawn last Wednesday also injured nearly 400 people as it flattened three medieval towns near the rugged Apennines. Prosecutor Giuseppe Saieva, based in the nearby provincial capital of Rieti, said the high human death toll "cannot only be considered the work of fate."

"The fault lines tragically did their work and this is called destiny, but if the buildings had been built like in Japan they would not have collapsed," Mr Saieva said in comments carried by Italian media.

Investigations are focusing on a number of structures, including an elementary school in Amatrice that crumbled despite being renovated in 2012 to resist earthquakes at a cost of €700,000. With summer holidays in their final weeks, the school was not yet in use. Many were shocked it did not withstand the 6.2 magnitude quake.

After an entire first-grade class and a teacher were killed in a 2002 quake in the southern town of San Giuliano di Puglia, Italian officials had pledged that the safety of schools, hospitals, and other critical public buildings would be guaranteed.

Questions also surround a bell tower in Accumoli that collapsed, killing a family of four sleeping in a neighbouring house, including a baby of eight months and a seven-year-old boy. That bell tower had been recently restored with special funds allocated after Italy's last major earthquake, which struck nearby L'Aquila in 2009.

Italy's national anti-Mafia prosecutor, Franco Roberti, vowed to work to prevent organised crime from infiltrating public works projects which will be eventually begun to rebuild the earthquake zone. "This risk of infiltration is always high," he said. "Post-earthquake reconstruction is historically a tempting morsel for criminal groups and colluding business interests."

A woman is rescued from a crowded wooden boat carrying more than 700 migrants in the Mediterranean sea, about 20km north of Sabratha, Libya, yesterday. Pictures: Emilio Morenatti/AP

Record 771 migrants rescued in a day by Irish Naval Service

Sean O'Riordan

The Irish Naval Service made a record 771 migrant rescues in one day in the Mediterranean yesterday, following several operations which began at 6.40am.

It came as the weather improved and cash-hungry people-smugglers sent hapless refugees out in even flimsier craft — primarily because the navy have destroyed the vessels the Islamic State-controlled gangs are using after rescuing migrants from them.

The crew of LÉ James Joyce initially rescued 617 people from three wooden craft and five dinghies and brought them onboard the ship where they were given food, water, and medical treatment.

Lieutenant Commander Neil Manning, who is in charge of the ship, then sent more boarding parties to a number of other migrant-carrying vessels to rescue their 154 occupants.

They were transferred to the safety of merchant ship Assorou, which was in the area at the time.

A man holds onto the side of a boat after jumping into the sea from an overcrowded wooden vessel in the Mediterranean yesterday.

LÉ James Joyce surpassed the previous record of 647 rescued in one day which was created last year by LÉ Eithne.

The last time LÉ James Joyce was involved in a rescue in the area was on June 29, because the weather off the coast of Libya deteriorated and the wind was blowing in the wrong direction.

However, yesterday morning, it became apparent the weather had significantly changed for the better and people smugglers reacted by putting as many vessels into the water as they could.

Of those taken onboard the navy ship, 454 were men, 138 were women, and 25 were children. The total number rescued yesterday was more than half the number LÉ James Joyce had retrieved from the sea since starting its tour of duty in the Mediterranean on July 16.

The rescues were undertaken 69km north east of the Libyan capital Tripoli.

People smugglers normally send out migrants in large wooden fishing vessels capable of holding up to 700 people and dinghies which can hold up to 130.

Yesterday, migrants were discovered crammed in a very small fishing boat and a much smaller dinghy than normal.

LÉ James Joyce was last night steaming to the Italian port of Calabria, where the ship's crew will hand the migrants over to the authorities.

The navy ship's crew has now rescued 1,882 migrants since it began its deployment in the region.

The ship is due to return from her mission to the Naval Service headquarters at Haulbowline, Co Cork, on September 30.

Bid to destroy crime lab files

Lorne Cook

Attackers rammed a car through the gates of Belgium's crime institute and set fire to a lab containing crime scene samples in an effort to destroy evidence.

Residents heard at least one explosion as the blaze erupted in a north Brussels suburb and Belgian media reported a bomb attack, but investigators said the noise was probably materials going up in flames.

Prosecutors said five people were detained for questioning and released without charge following the incident at about 2am yesterday in Neder-Over-Heembeek. Nobody was injured.

"It's probably not terrorism. It's a criminal act," said Ine Van Wymersch, a spokeswoman for the Brussels prosecutor's office.

"I cannot confirm that there was any bomb."

The forensic facility assists Belgium's justice authorities in carrying out their investigations and the lab contains DNA samples found at crime scenes.

"The location was not chosen randomly," said Van Wymersch, adding that the lab contains sensitive information being used in ongoing investigations.

The fire and damage hampered the efforts of investigators to enter the scene, and she said it would take some time to establish exactly what had been destroyed.

"The laboratory does thousands of analyses each year, so we don't know what damage has been done yet," said Van Wymersch. "It is obvious that several individuals would have an interest in making elements in their justice file disappear."

Belgium has been on high alert since suicide bombings at the Brussels airport and subway killed 32 people in March, and security forces remain on standby for an.

Prime minister Charles Michel announced plans to ease the load on the security services at the weekend.

They include creating a new force to protect key buildings and using more private security firms for concerts or sports events.

Some of the reindeer that were killed by lightning. Picture: AP

323 reindeer killed in lightning strike

More than 300 wild reindeer have been killed by lightning in Norway in what wildlife officials are calling an unusually large natural disaster.
The Norwegian Environment Agency has released eerie images showing a jumble of reindeer carcasses scattered across a small area on the Hardangervidda mountain plateau. The agency says 323 animals died in the lightning storm.
Agency spokesman Kjartan Knutsen told the AP it's not uncommon for reindeer or other wildlife to be killed by lightning strikes, "but we have not heard about such numbers before."

Girl charged with support of terrorism

A teenage girl has been charged with attempted murder and supporting a terrorist organisation by German federal prosecutors. Officials claim the 16-year-old German-Moroccan citizen was acting on behalf of the Islamic State group when she wounded a policeman with a kitchen knife at Hanover's central station on February 26. Safia S, whose surname was not given due to privacy rules, is also being charged with committing bodily harm. Police arrested her at the scene of the attack. Prosecutors said in a statement yesterday that they also are charging a 19-year-old German-Syrian man with failing to prevent the attack.

More world news p15

IS pair arrested for anthrax attempt

Two people accused of being part of an IS group cell of medics attempting to launch an anthrax attack in Kenya have been arrested following a tip-off from members of the public, police said.

Colombia peace deal begins

Joshua Goodman
Bogota

A permanent ceasefire has taken effect in Colombia, the latest step in bringing an end to 52 years of bloody combat between the government and the country's biggest rebel group.

The commander of the Revolutionary Armed Forces of Colombia announced that his fighters ceased hostilities beginning at 12.01am yesterday as a result of the peace accord the sides reached last week.

Colombian president Juan Manuel Santos made a similar announcement, saying the military would halt attacks on the Farc beginning yesterday.

Farc leader Rodrigo Londono made his announcement in Havana, where rebel and government negotiators talked for four years to reach the deal on ending one of the world's longest-running conflicts.

"Never again will parents be burying their sons and daughters killed in the war," said Londono. "All rivalries and grudges will remain in the past."

Colombia is expected to hold a national referendum on October 2 to give voters the chance to approve the accord, which would end political violence that has claimed more than 220,000 lives and driven more than 5m people from their homes over five decades.

Top Farc commanders are planning to gather one final time in mid-September to ratify the deal.

Under the 297-page accord, Farc guerrillas are supposed to turn over their weapons within six months after the deal is formally signed. In return, Farc's still unnamed future political movement will be given a minimum 10 congressional seats — five in the lower house, five in the senate — for two legislative periods.

In addition, 16 lower-house seats will be created for grassroots activists in rural areas traditionally neglected by the state and in which existing political parties will be banned from running candidates.

Critics of the peace process contend that will further boost the rebels' post-conflict political power.

After 2026, both arrangements would end and the former rebels would have to demonstrate their political strength at the ballot box.

Not all hostilities are ending under the deal with Farc. The much smaller National Liberation Army remains active, although it is pursuing its own peace deal with the government.

Gene Wilder will be remembered by many for his namesake role in 'Willy Wonka & the Chocolate Factory'. Picture: Getty

Wilder dies at age of 83

US actor Gene Wilder, remembered by many for his namesake role in *Willy Wonka & the Chocolate Factory*, has died at the age of 83, his family confirmed.

The comic actor also starred in classic films such as *The Producers*, *Blazing Saddles*, and *Young Frankenstein*.

In 1989, the two-time Oscar-nominated actor was diagnosed with non-Hodgkins lymphoma.

Wilder's nephew confirmed the actor died on Sunday in Stamford, Connecticut, due to complications from Alzheimer's disease.

The star first made waves on Broadway before transitioning to the silver screen for a brief role as a kidnapped undertaker in *Bonnie and Clyde* in 1967.

Mel Brooks, who directed *The Producers*, said on Twitter: "Gene Wilder - One of the truly great talents of our time. He blessed every film we did with his magic & he blessed me with his friendship."

Comedian and presenter Dara Ó Briain tweeted: "Gene Wilder has died. Sad news, but such a life well lived. For me, Young Frankenstein just pips Wonka, but so many wonderful performances.

"Expecting to hear people were fans of *Blazing Saddles*, *Producers* and *Stir Crazy*, but amazing number going for *See No Evil, Hear No Evil*."

Stephen Fry tweeted: "Farewell #GeneWilder, comic genius. Thank you for all those happy happy hours."

Weiner split after caught sexting

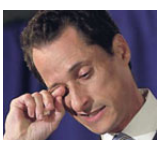
Huma Abedin, a longtime aide to Hillary Clinton, announced she is separating from former Representative Anthony Weiner following a report he again exchanged sexually charged messages with another woman.

"After long and painful consideration and work on my marriage, I have made the decision to separate from my husband," Abedin said in a statement.

"Anthony and I remain devoted to doing what is best for our son, who is the light of our life.

"During this difficult time, I ask for respect for our privacy."

The decision comes after the *New York Post* published a photo of an underwear-clad Weiner and his son, Jordan, across its front page, reporting that Weiner had sent the photo to a woman he had met online.



Anthony Weiner resigned from Congress in 2011 over racy texts.

The *New York Post* identified the woman only as a "40-something divorcee" who lives "out West" and is a supporter of Donald Trump.

Other photos included several shots of Weiner bare-chested and two close-ups of his bulging underwear. In one of the pictures, Weiner is in bed with his toddler son while he is texting the woman, according to the newspaper.

Weiner resigned from Congress in 2011 after being caught sending racy messages and photos to women he met online. He was found to be doing the same again during his 2013 race for New York City mayor.

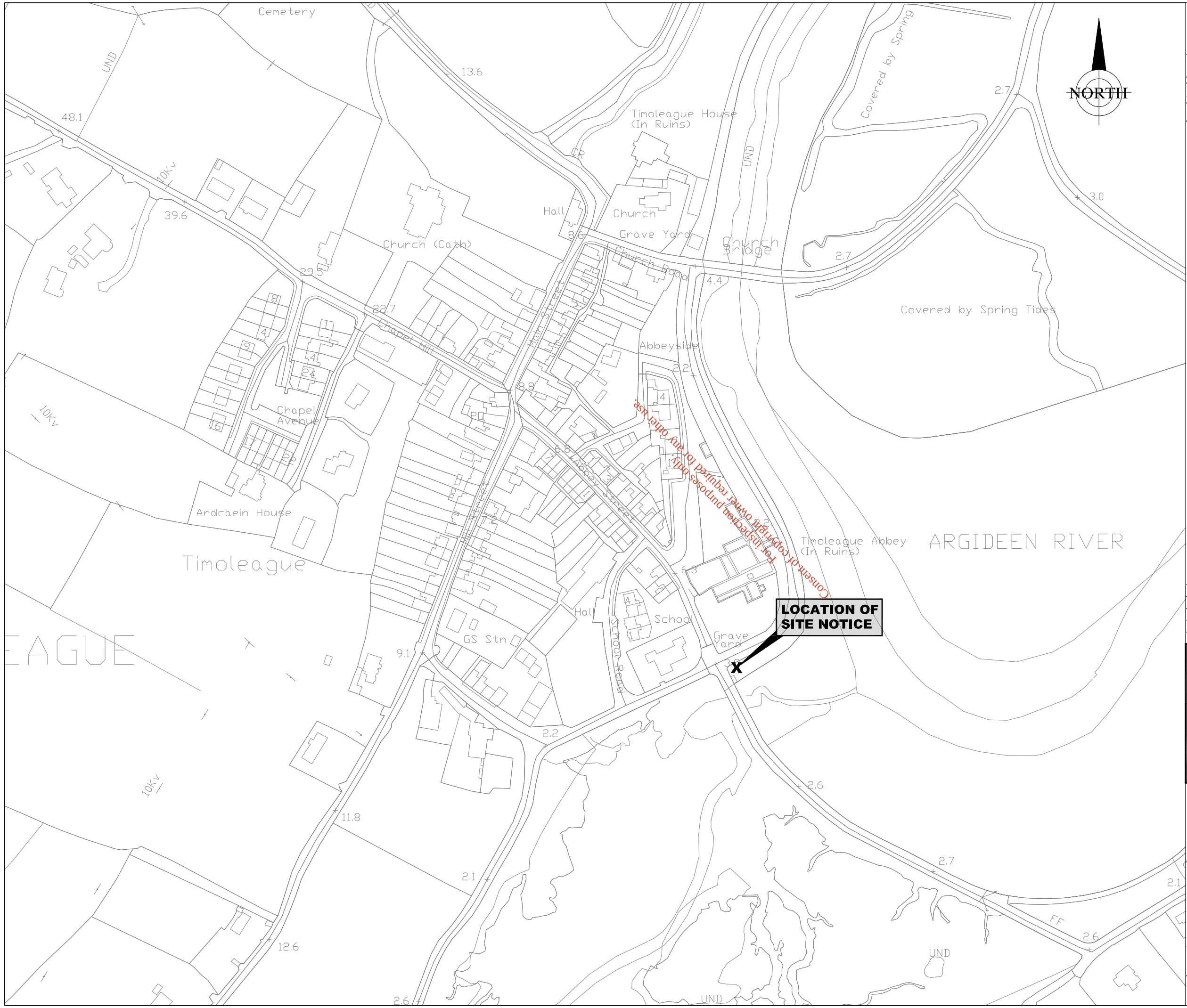
The scandal was the subject of an award-winning documentary, *Weiner*, released this year.

Abedin and Weiner wed in 2010 in a ceremony officiated by former US president Bill Clinton.

In a recent interview with the *New York Times*, Weiner declined to answer a question about whether he was "still engaging in the activities" that had gotten him in trouble in the past.

"I'm not going to go down the path of talking about any of that," he said.

Attachment B.8(i) Site Notice Location Timoleague



NOTES

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No.	Date	Drwn	Chkd	Revision Description

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SENR.ENGR. (WATER SERVICES),
COURTHOUSE, SKIBBEREEN.

M. MURRELL.,
DIRECTOR OF SERVICES
WEST CORK

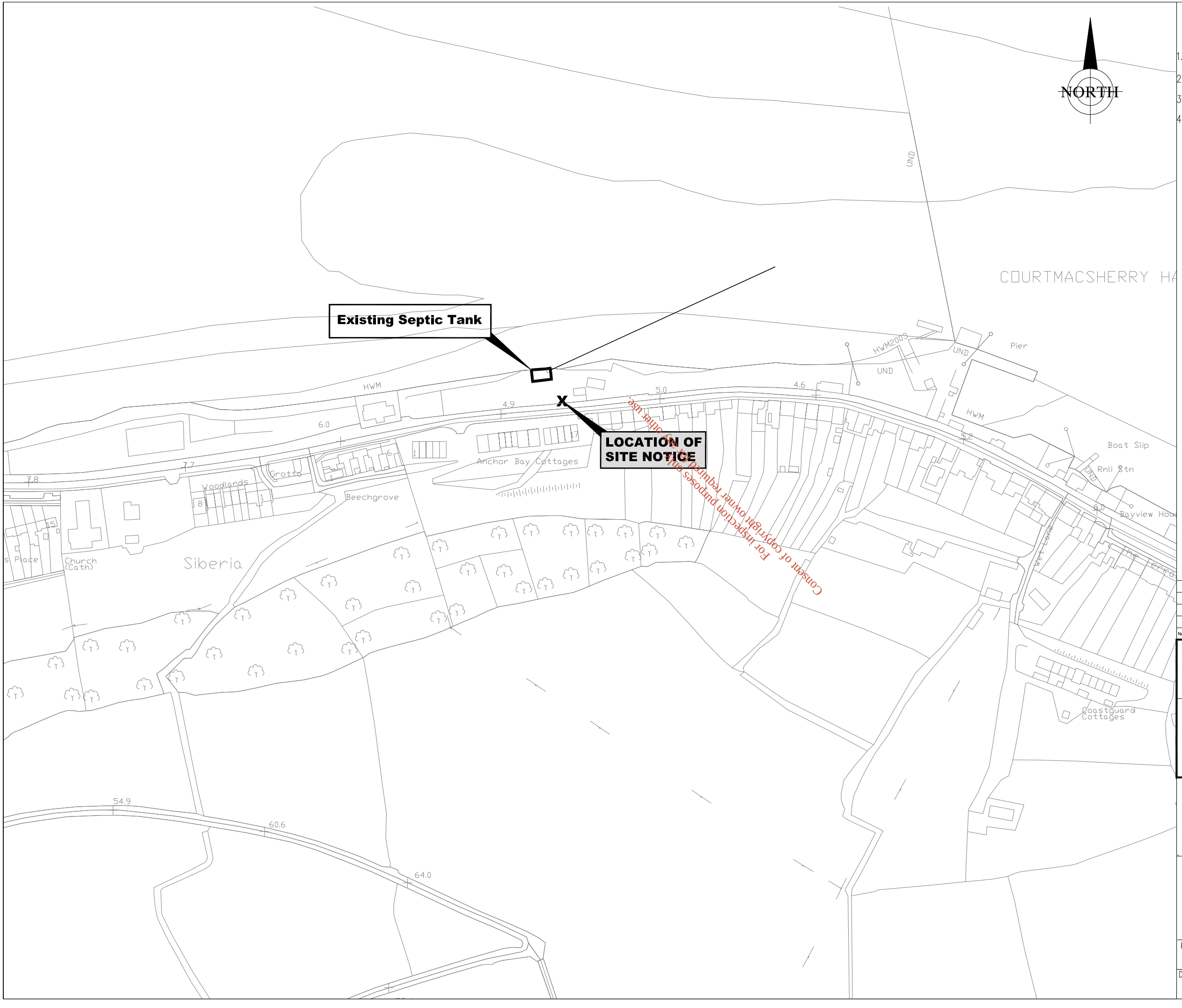
Job Title:
COURTMACSHERRY_TIMOLEAGUE
WASTE_WATER_DISCHARGE
LICENCE_APPLICATION

Drawing Title:
SITE_NOTICE
TIMOLEAGUE_LOCATION
ATTACHMENT_B.8(I)

Prepared By:	Checked By:	Date:
J.CREAGH	D.GROARKE	JUNE.2009

Drawing number:	Scales:	Rev:
TIMO_B8_01(I)	1:2500	-

Attachment B.8(ii) Site Notice Location Courtmacsherry



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DIRECTOR OF SERVICES
WEST CORK

Job Title:
COURTMACSHERRY_TIMOLEAGUE
WASTE_WATER_DISCHARGE
LICENCE_APPLICATION

Drawing Title:
SITE_NOTICE
COURTMACSHERRY_LOCATION
ATTACHMENT_B.8(II)

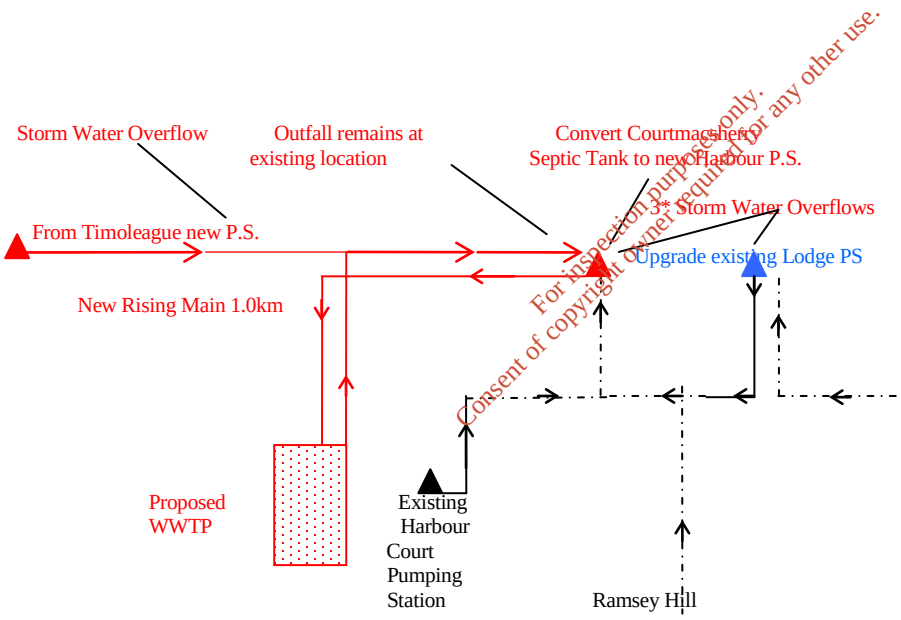
Prepared By:	Checked By:	Date:
J.CREAGH	D.GROARKE	JUNE.2009

Drawing number:	Scales:	Rev:
TIMO_B8_01	1:2500	-

Attachment C.1(i) Network Schematic – Existing & Proposed

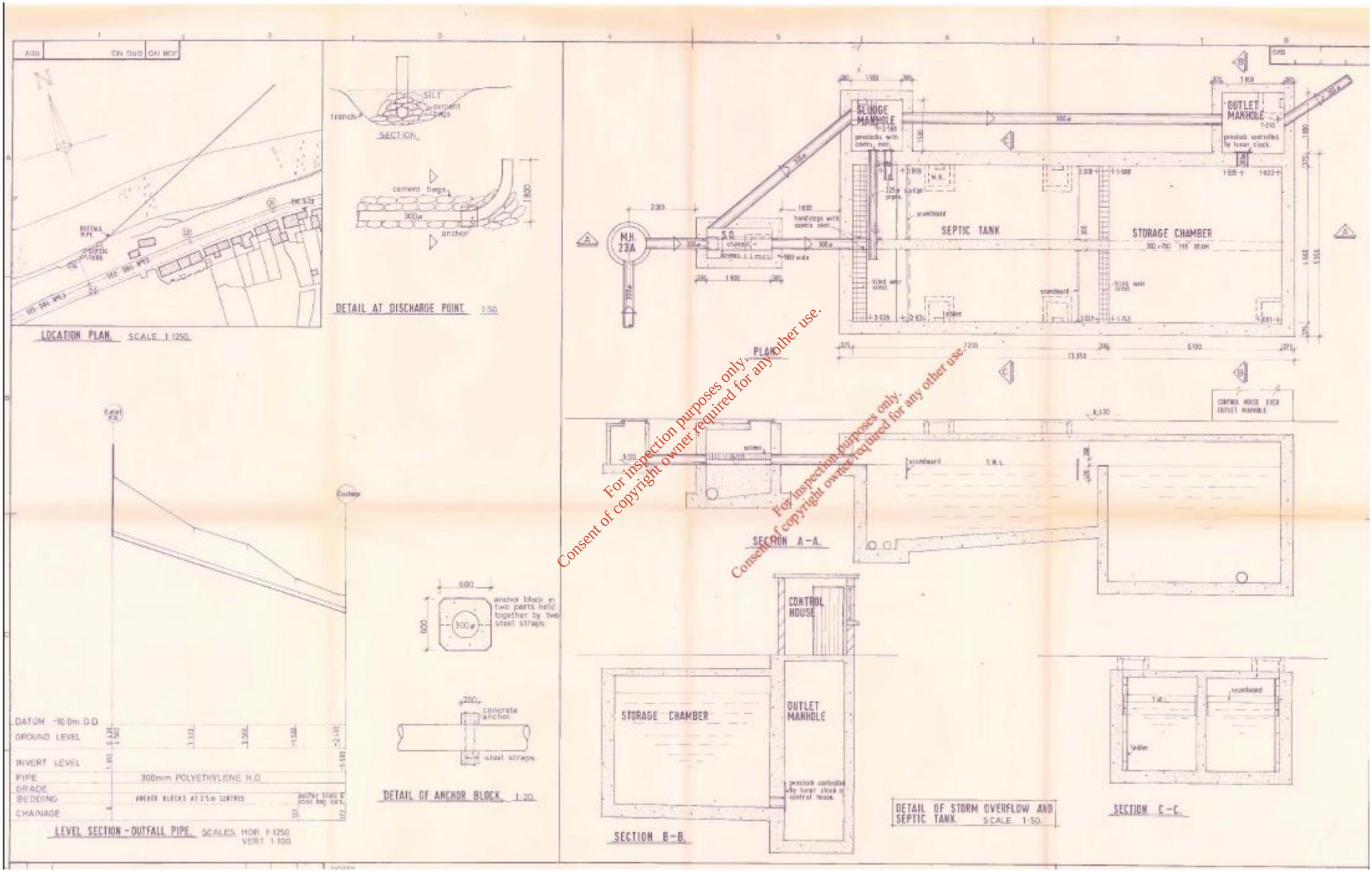
Attachment No C.1(i)

Schematic of Upgraded Courtmacsherry Timoleague Sewerage Scheme



Attachment C.1(ii) Septic Tank Outfall and SWO

Attachment C.1(ii) Existing Septic Tank Outfall & Stormwater Overflow details



Attachment C.1.2 Emergency Overflow Locations

UISCE ÉIREANN : IRISH WATER

Legend

- Emergency Overflow (EO)
- WTP Treatment plant
- IW Agglomeration Boundary

0 45 90 180 Meters

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale:	1:7,000 @ A3
Revision No.:	0
Attachment No.	C.1.2
Drawn By:	E.Laurinaviciute
Checked By:	M'OReilly
Approved By:	M'OReilly
Drawn Date	25/07/2016
Checked Date:	25/07/2016
Approved Date:	25/07/2016

N

2. Whilst every care has been taken in its compilation, Irish Water gives this information as to the position of its underground network as a general guide only on the strict understanding that it is based on the best available information provided by each Local Authority in Ireland to Irish Water. Irish Water can assume no responsibility for and give no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided and does not accept any liability whatsoever arising from any errors or omissions.This information should not be relied upon in the event of excavations or any other works being carried out in the vicinity of the Irish Water underground network. The onus is on the parties carrying out excavations or any other works to ensure the exact location of the Irish Water underground network is identified prior to excavations or any other works being carried out. Service connection pipes are not generally shown but their presence should be anticipated.

Map Template Design: kcarroll@water.ie

Existing Emergency Overflow Location

Attachments D.1 Discharges to Surface Waters

WWD Licence Application Annex I

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

Existing

Volume emitted m^3 (i)					
Normal/day	275.20	Maximum/day	825.59		
Maximum rate/hour	34.40		min/hr	hr/day	day/year
Dry Weather Flow/sec	0.0032	Period of emission (avg)	60.00	24.00	365.00

Current PE 1223

Note these values are for the PE and emissions from existing system i.e. of what is discharged via existing Courtmacsherry Village septic tank + excludes St. Joseph's Place which has own discharge.

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

Proposed

Volume emitted m^3 (i)					
Normal/day	335.25	Maximum/day	1050.98		
Maximum rate/hour	43.79		min/hr	hr/day	day/year
Dry Weather Flow/sec	0.0039	Period of emission (avg)	60.00	24.00	365.00

Current PE 149
Future PE 1557

Note These values are for the joint Courtmacsherry-Timoleague agglomeration p.e. which will be collected discharged via SW1.

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

				30/10/2008	
1	pH		=	7.6	
2	Temperature		=		
3	Electrical Conductivity (@ 20°C)		=	843	
		Max. daily average per day			
				(mg/l)	**kg/day**
4	Suspended Solids		=	36	9.907
5	Ammonia as (N)		=	7.5	2.064
6	Biochemical Oxygen Demand		=	14.08	3.875
7	Chemical Oxygen Demand		=	49	13.485
8	Total Nitrogen (as N)		=	6	1.651
9	Nitrite (as N)		=	0.777	0.214
10	Nitrate (as N)		=	6.36	1.750
11	Total Phosphorus (as P)		=	0.5	0.138
12	Orthophosphate (as P)		=	1.11	0.305
13	Sulphate (SO4)		=	38.8	0.000
			(µg/l)		
14	Phenols	(sum)	<	5	0.000

Note: all samples are grab so with exception of pH and conductivity, max not max average is used here.

Normal Flow rate= 275.20

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

Substance	Unit of Measurement	Sampling Method		30/10/2008 Max dailyAvg.	kg/day	MAC-EQS Limits
Atrazine	µg/l	Grab	<	0.01	2.75198E-06	2
Dichloromethane	µg/l	Grab	=	16.3	0.004485732	
Simazine	µg/l	Grab	<	0.01	2.75198E-06	4
Toluene	µg/l	Grab	<	0.1	2.75198E-05	
Tributyltin	µg/l	Grab	<	**0.02**	5.50397E-06	0.0015
Xylenes	µg/l	Grab	<	0.2	5.50397E-05	
Arsenic	µg/l	Grab	=	1	0.000275198	
Chromium	µg/l	Grab	<	0.02	5.50397E-06	
Copper	µg/l	Grab	<	0.02	5.50397E-06	
Cyanide	µg/l	Grab	<	5	0.001375991	
Flouride	µg/l	Grab	=	170	0.046783704	
Lead	µg/l	Grab	<	0.02	5.50397E-06	
Nickel	µg/l	Grab	<	0.02	5.50397E-06	
Zinc	µg/l	Grab	<	0.02	5.50397E-06	
Boron	µg/l	Grab	=	0.081	2.22911E-05	
Cadmium	µg/l	Grab	<	0.02	5.50397E-06	0.45
Mercury	µg/l	Grab	<	0.02	5.50397E-06	0.07
Selenium	µg/l	Grab	=	2.8	0.000770555	
Barium	µg/l	Grab	<	0.02	5.50397E-06	

NORMAL FLOW RATE: 275.20

Note: The limit of detection is higher than MAC for TBT.

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

Note this is the combination of all 5 secondary discharges in Timoleague as the flow rate per discharge is not available

Existing

Volume emitted m^3 (i)					
Normal/day	35.33	Maximum/day	105.98		
Maximum rate/hour	4.42		min/hr	hr/day	day/year
Dry Weather Flow/sec	0.0004	Period of emission (avg)	60.00	24.00	365.00

Current PE 157

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

21/05/2009

(Primary Discharge Point)

			SW8	SW7	SW10	SW11
1	pH	=	8.3	8.7	8.6	7.9
2	Temperature	=				
3	Electrical Conductivity (@ 20°C)	=	1049	955	1466	3060
			Max. daily average per day (mg/l)			
4	Suspended Solids	=	172	155	76	157
5	Ammonia as (N)	=	39.7	57.8	30.4	45.5
6	Biochemical Oxygen Demand	=	297	189	50	69
7	Chemical Oxygen Demand	=	771	457	98	232
8	Total Nitrogen (as N)	=	75.6	105.7	50.9	75.9
9	Nitrite (as N)	=	0.1	0.1	1.058	0.1
10	Nitrate (as N)	=	0.5	0.5	1.542	0.5
11	Total Phosphorus (as P)	=	29.65	11.08	6.7	5.61
12	Orthophosphate (as P)	=	21	7.12	3.48	4.43
13	Sulphate (SO4)	=	69.3	59	81.5	130.5
				(µg/l)		
14	Phenols (sum)	<	7.581	37.44	0.1	5.413

Note: all samples are grab so with exception of pH and conductivity, max not max average is used here.

*As flow rates are not available for the secondary discharges sampled, mass loadings are not possible.

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

				21/05/2009					
				Max dailyAvg.					
Substance	**Unit of Measurement**	**Sampling Method**		**SW8**	**SW7**	**SW10**	**SW11**	**kg/day***	MAC-EQS Limits
Atrazine	µg/l	Grab	<	0.01	0.01	0.01	0.01		2
Dichloromethane	µg/l	Grab	<	1	1	1	1		
Simazine	µg/l	Grab	<	0.01	0.01	0.01	0.01		4
Toluene	µg/l	Grab	<	0.28	0.28	0.28	0.28		
Tributyltin	µg/l	Grab	<		**0.25**				0.0015
Xylenes	µg/l	Grab	<	1	1	1	1		
Arsenic	µg/l	Grab	=	0.96	1	0.96	2		
Chromium	µg/l	Grab	<	20	20	20	20		
Copper	µg/l	Grab	=	34.5	20	20	20		
Cyanide	µg/l	Grab	=	9	5	5	9		
Flouride	µg/l	Grab	=	449	473	574	476		
Lead	µg/l	Grab	<	20	20	20	20		
Nickel	µg/l	Grab	<	20	20	20	20		
Zinc	µg/l	Grab	=	130.9	61.5	20	27.1		
Boron	µg/l	Grab	=	20	20	48.255	131		
Cadmium	µg/l	Grab	<	**20**	**20**	**20**	**20**		0.45
Mercury	µg/l	Grab	<	**0.2**	**0.2**	**=0.4**	**0.2**		0.07
Selenium	µg/l	Grab	=	8.2	4.4	18.3	37.4		
Barium	µg/l	Grab	<	20	20	20	20		

*As flow rates are not available for the secondary discharges sampled, mass loadings are not possible.

The limit of detection is not low enough for TBT, Cd and Hg.

Attachment E.1 Waste Water Discharge Frequency & Quantities

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

Identification code for discharge point		Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m^3/annum)	
SW1	Primary	365	100,447	
SW6	Secondary	365	9.11	approximate from 15 houses
SW7	Secondary	365	35.33	Combined total for five secondary discharges from Timoleague.
SW8	Secondary	365		
SW9	Secondary	365		
SW10	Secondary	365		
SW11	Secondary	365		

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

Identification code for discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m^3/annum)	Complies with Definition of Storm Water Overflow
SW2	7	0	Yes
SW3	7	0	Yes
SW4	Not Applicable	Not Applicable	Proposed
SW5	Not Applicable	Not Applicable	Proposed

Attachment E.2(i) Historic Ambient Monitoring Locations

150000

Upstream Argideen River
IG: 146486 E, 045753 N

Downstream Burren Rock
IG: 150649E; 043103N

Primary Discharge

Existing WWTP

Proposed WWTP

Upstream Spidal River
IG: 146835E, 042533N

UISCE ÉIREANN : IRISH WATER

Legend

- Ambient Monitoring Location
- Primary Discharge
- Treatment plant
- IW Agglomeration Boundary

0 100 200 400 Meters

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale:	1:15,000 @ A3
Revision No.:	0
Attachment No.	E.2 (i)
Drawn By:	KS
Checked By:	M'OReilly
Approved By:	M'OReilly
Drawn Date	17/08/2016
Checked Date:	17/08/2016
Approved Date:	17/08/2016

Map Template Design: kcarroll@water.ie

Historic Ambient Monitoring Locations

Attachment E.2(ii) EPA Ambient Monitoring Locations

150000

River Argideen at Timoleague TW05003171AR1002
147205E; 043811N

Courtmacsherry Beach TW05003171AR1009
151707E; 042994N

Existing & Proposed SW1:
IG 150732E; 042818N

Proposed WWTP

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UISCE ÉIREANN : IRISH WATER

Legend

- EPA Ambient Monitoring Location
- Primary Discharge Point
- Treatment plant
- IW Agglomeration Boundary

0 120 240 480 Meters

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale:	1:18,000 @ A3
Revision No.:	0
Attachment No.	E.2(ii)
Drawn By:	E.Laurinaviciute
Checked By:	M'OReilly
Approved By:	M'OReilly
Drawn Date	21/07/2016
Checked Date:	21/07/2016
Approved Date:	21/07/2016

Map Template Design: kcarroll@water.ie

EPA Ambient Monitoring Locations

Attachment E.2(iii) Proposed Ambient Monitoring Locations

150000

aSW1u1 Inchy Bridge
IG: 146486 E, 045753 N

aSW1u2 Spidal Bridge
IG: 146835E, 042533N

Primary Discharge

Existing WWTP

Proposed WWTP

© Ordnance Survey Ireland

UISCE ÉIREANN : IRISH WATER

Legend

- Ambient Monitoring Location
- Primary Discharge
- Treatment plant
- IW Agglomeration Boundary

0 100 200 400 Meters

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale:	1:15,000 @ A3
Revision No.:	0
Attachment No.	E.2 (iii)
Drawn By:	KS
Checked By:	M'OReilly
Approved By:	M'OReilly
Drawn Date	17/08/2016
Checked Date:	17/08/2016
Approved Date:	17/08/2016

Map Template Design: kcarroll@water.ie

Proposed Ambient Monitoring Locations

Attachment F.1(i) Receiving Waters Data

F.1(i)(a) Receiving Waters - Upstream Primary Discharge Point

River Argideen

Parameter		Results(mg/l)
		21/05/2009
pH	=	7.8
Temperature	=	
Electrical Conductivity (@20°C)	=	207
Suspended Solids	<	2.5
Ammonia (as N)	<	0.1
Biochemical Oxygen Demand	=	1
Chemical Oxygen Demand	<	21
Dissolved Oxygen	=	
Hardness (as CaCo3)	=	
Total Nitrogen (as N)	=	4.51
Nitrite (as N)	<	0.1
Nitrate (as N)	=	3.46
Total Phosphorus (as P)	<	0.05
Orthophosphate (as P) - unfiltered	=	
Sulphate (SO4)	<	30
Phenols (sum) Note : (ug/l)	<	0.1

River Spital

Parameter		Results(mg/l)
		21/05/2009
pH	=	7.6
Temperature	=	
Electrical Conductivity (@20°C)	=	374
Suspended Solids	=	5
Ammonia (as N)	=	0.5
Biochemical Oxygen Demand	=	4
Chemical Oxygen Demand	<	21
Dissolved Oxygen	=	
Hardness (as CaCo3)	=	
Total Nitrogen (as N)	=	12.51
Nitrite (as N)	=	0.257
Nitrate (as N)	=	8.903
Total Phosphorus (as P)	=	0.16
Orthophosphate (as P) - unfiltered	=	0.09
Sulphate (SO4)	<	30
Phenols (sum) Note : (ug/l)	<	0.1

F.1(i)(a) Receiving Waters - Downstream (Primary Discharge Point)

Burren Rock (150649 E, 043103 N)*

Parameter		Results(mg/l)
		30/10/2008
pH	=	7.9
Temperature	=	
Electrical Conductivity (@25oC)	=	41
Suspended Solids	=	162
Ammonia (as N)	=	6.8
Biochemical Oxygen Demand	<	1
Chemical Oxygen Demand	=	61
Dissolved Oxygen		
Hardness (as CaCo3)		
Total Nitrogen (as N)	<	1
Nitrite (as N)		
Nitrate (as N)		
Total Phosphorus (as P)	<	0.3
Orthophosphate (as P) - unfiltered	<	0.05
Sulphate (SO4)	=	2285.4
Phenols (sum) Note : (ug/l)	=	6

*Burren Rock is an ambient marine sampling location and not "Downstream" per se.

F.1(i)(b) Receiving Waters - Upstream (Primary Discharge Point)

River Argideen

Parameter		Results(µg/l)
		21/05/2009
Atrazine	<	0.01
Dichloromethane	<	1
Simazine	<	0.01
Toluene	<	0.28
Tributyltin	=	
Xylenes	<	1
Arsenic	<	0.96
Chromium	<	20
Copper	<	20
Cyanide	<	5
Fluoride	<	100
Lead	<	20
Nickel	<	20
Zinc	<	20
Boron	=	30.805
Cadmium	<	20
Mercury	=	0.2
Selenium	=	4.6
Barium	<	20

River Spital

Parameter		Results(µg/l)
		21/05/2009
Atrazine	<	0.01
Dichloromethane	<	1
Simazine	<	0.01
Toluene	<	0.28
Tributyltin	=	
Xylenes	<	1
Arsenic	=	1
Chromium	<	20
Copper	<	20
Cyanide	<	5
Fluoride	<	100
Lead	<	20
Nickel	<	20
Zinc	<	20
Boron	<	20
Cadmium	<	20
Mercury	<	0.2
Selenium	=	3.1
Barium	<	20

F.1(i)(b) Receiving Waters - Downstream (Primary Discharge Point)

Burren Rock(150649 E, 043103 N)

Parameter		Results(µg/l)
		30/10/2008
Atrazine	<	0.01
Dichloromethane	=	6.7
Simazine	<	0.01
Toluene	<	0.1
Tributyltin	<	0.02
Xylenes	<	0.2
Arsenic	<	0.2
Chromium	<	0.02
Copper	<	0.02
Cyanide	<	5
Fluoride	=	0.64
Lead	<	0.02
Nickel	<	0.02
Zinc	<	0.02
Boron	=	2.964
Cadmium	<	0.2
Mercury*	<	**0.02**
Selenium	=	28.2
Barium	<	0.02

Attachments F.1(iii) Natura Impact Statment

Irish Water Report

Natura Impact Statement as part of the Courtmacsherry and Timoleague Waste Water Discharge Licence Application

Contents

Introduction

This Natura Impact Statement provides an Appropriate Assessment (AA) of the existing wastewater discharge from the Courtmacsherry and Timoleague agglomeration, located in County Cork. This Report assesses whether the current discharges from the agglomeration, alone or in combination with other plans and projects, are likely to have significant effects on a European Site(s) in view of best scientific knowledge and the conservation objectives of the site(s). European Sites are those identified as sites of European Community importance designated as Special Areas of Conservation under the Habitats Directive or as Special Protection Areas under the Birds Directive.

This report follows the guidance for AA published by the Environmental Protection Agency (EPA) '*Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007)*' (EPA, 2009); and takes account of the Department of the Environment, Heritage and Local Government guidelines '*Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*' (DoEHLG, 2009) and Circular L8/08 '*Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments*' (DoEHLG, 2008).

This Natura Impact Statement was completed by Nicholas O'Dwyer Ltd. on behalf of Irish Water.

Legislative Context

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as "The Habitats Directive", provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/ECC) as codified by Directive 2009/147/EC.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

> *"Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public".*

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the [Natura 2000] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted".

Methodology

Guidance Followed

Both EU and national guidance exists in relation to Member States fulfilling their requirements under the EU Habitats Directive, with particular reference to Article 6(3) and 6(4) of that Directive. The methodology followed in relation to this AA has had regard to the following guidance:

- Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). Environmental Protection Agency, (EPA, 2009).
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of Environment, Heritage and Local Government, (DoEHLG, 2010).
- Circular L8/08 – Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments. Department of Environment, Heritage and Local Government, (DoEHLG, 2008).
- Communication from the Commission on the Precautionary Principle. Office for Official Publications of the European Communities, Luxembourg, (EC, 2000a).
- Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg, (EC, 2000b).
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Brussels (EC, 2001).
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission. Office for Official Publications of the European Communities, Luxembourg, (EC, 2007).
- Nature and biodiversity cases: Ruling of the European Court of Justice. Office for Official Publications of the European Communities, Luxembourg (EC, 2006).
- European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No.477 of 2011).
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013).

Stages Involved in the Appropriate Assessment Process

Stage 1: Screening/Test of Significance

This process identifies whether the Courtmacsherry and Timoleague agglomeration discharges are directly connected to or necessary for the management of a European Site(s). This stage identifies whether the discharge is likely to have significant impacts on European Site(s) either alone or in combination with other projects or plans.

The output from this stage is a determination for each European Site of not significant, significant, potentially significant, or uncertain effects. The latter three determinations will cause that site to be brought forward to Stage 2 Appropriate Assessment.

Stage 2: Appropriate Assessment

This stage considers the impact of the current waste water discharge from the agglomeration on the integrity of a European Site(s), either alone or in combination with other projects or plans, with respect to (1) the site's conservation objectives and (2) the site's structure and function and its overall integrity. Where adverse impacts are identified, mitigation measures to negate those impacts are determined.

The output from this stage is a Natura Impact Statement (NIS). This document must include sufficient information for the EPA (Competent Authority) to carry out the Appropriate Assessment. If the assessment is negative, *i.e*. adverse effects on the integrity of a site cannot be excluded then the process must consider alternatives (Stage 3) or proceed to Stage 4.

Stage 3: Assessment of Alternatives

This process examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European Site. This assessment may be carried out concurrently with Stage 2 in order to find the most appropriate solution. If no alternatives exist or all alternatives would result in negative impacts to the integrity of the European sites then the process either moves to Stage 4 or the project is abandoned.

Stage 4: Assessment Where Adverse Impacts Remain

This process is an assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

Field Walkover Surveys

A field walkover survey was undertaken by Ecologist Tony Nagle on the 28th of April 2015 to identify the potential for qualifying species and habitats in the surrounding environs of the Courtmacsherry and Timoleague discharge locations.

Consultation

The EPA, as the competent authority, will seek NPWS advice as may be required in reaching their decision and the NPWS can only communicate with Irish Water on request from the competent authority (*i.e*. the EPA).

Stage 1: Screening

The EPA Screening Determination Report stated "*That the activity is not directly connected with or necessary to the management of the site as a European site and that it cannot be excluded, on the basis of objective information, that the activity, individually or in combination with other plans or projects will have a significant effect on a European site and accordingly determined that an Appropriate Assessment of the activity is required.*

This determination is based on:

- *The quality of the effluent discharged from the agglomeration, and the potential impacts of those discharges on the receiving water;*
- *The poor water quality status assigned to the receiving water (Argideen Estuary, IE_SW_090_0200) under the Water Framework Directive; and*
- *The connectivity of the primary discharge from the agglomeration to the European sites*."

Based on the above assessment and in accordance with Article 6(3) of the Habitats Directive, the discharges from the Courtmacsherry and Timoleague agglomeration will be brought forward for a Stage 2 Appropriate Assessment.

Stage 2: Appropriate Assessment

The Courtmacsherry Estuary SAC (Site Code: 001230) and the Courtmacsherry Bay SPA (Site Code: 004219) have been determined as requiring Appropriate Assessment and are described in the following sections below. All the potential impacts resulting from the Courtmacsherry and Timoleague discharges are detailed in relation to the conservation objectives of these designated sites.

Description of the Project

The villages of Courtmacsherry and Timoleague are located in West Cork, approximately 12 km south of Bandon.

Courtmacsherry

The existing waste water treatment plant in Courtmacsherry consists of two septic tanks. The main septic tank located near the centre of the village is a septic tank designed to cater for 500 PE which discharges to the tidal channel 172 metres to the north-east in Courtmacsherry Harbour (part of the Argideen Estuary) at NGR 150732E 042818N. The system is grossly overloaded. The second septic tank, located at the western end of the village, currently serves 15 no houses at St John's Place estate, and discharges to the low water channel of the estuary at NGR 150106E, 042711N. The current capacity and operation of the Courtmacsherry treatment system is inadequate to meet the requirements of the village.

Timoleague

Timoleague currently has an antiquated waste water collection system with no form of waste water treatment system in place. The collection system discharges raw waste water directly to the Argideen Estuary via five separate outfalls as outlined below:

- 720 mm diameter outfall discharging directly to estuary at Abbey Bridge (NGR 147200E, 43523N)
- 150 mm diameter outfall discharging into Estuary at School Road south of Abbey Bridge (NGR 147132E, 43496N)
- 100 mm diameter outfall discharging into the estuary adjacent to the school west of Abbey Bridge (NGR 147141E, 43507N)
- 150 mm diameter outfall discharging to the estuary between Abbey Bridge and Church Bridge adjacent to Timoleague Abbey (NGR 147209E, 43702N)
- Outfall located just south of Church Bridge (NGR. 147176E, 43789N)

This system does not provide any form of appropriate treatment and is considered to be having a negative impact on background water quality in the Argideen Estuary/Courtmacsherry Harbour. The existing system is generally a combined system, although a new separate foul sewer was constructed recently in Chapel Hill.

The current peak summer loading population equivalent (PE) for the combined agglomerations of Timoleague (460 PE) and Courtmacsherry (1,450 PE) is 1,910 PE including the non-domestic contributions. The projected year 2021 peak summer loading for the combined agglomeration of Timoleague (475 PE) and Courtmacsherry (1,520 PE) is 1,995 PE.

There is currently no effluent monitoring at Courtmacsherry or Timoleague.

Description of the Receiving Environment and Monitoring Results

The receiving waterbody of the effluent from the Courtmacsherry and Timoleague agglomeration is the Argideen Estuary/Courtmacsherry Harbour which flows into Courtmacsherry Bay. The effluent discharges from the agglomeration flow directly into the Courtmacsherry Estuary SAC and the Courtmacsherry Bay SPA.

Based on the 2010-2011 EPA monitoring data, the current water quality status of the Argideen Estuary is Eutrophic.

The current Transitional Waterbody WFD Status 2010-2012 of the Estuary is Poor and the downstream Coastal Waters status is Moderate.

There is currently no ambient monitoring of the receiving water by IW.

The current wastewater flows from both the Timoleague and Courtmacsherry agglomerations discharge practically untreated into the Argideen Estuary and Courtmacsherry Harbour respectively. While the flows from Courtmacsherry pass through a septic tank prior to discharge, the degree of treatment which they receive is considered to be relatively minor due to the population loading for which the system now caters. It is therefore considered that the flows from both Timoleague and Courtmacsherry are having a negative impact on the water quality in Argideen Estuary/Courtmacsherry Harbour and contributing to the prevalence of opportunistic algae within this body of water. The 2010-2011 EPA data from each of the monitoring locations at the Argideen Estuary reaffirms the assumption with regard to deterioration in water quality due to untreated discharges, particularly in the case of Timoleague.

Field Walkover Survey

A site walkover survey was conducted by Tony Nagle (Ecologist) on the 28th of April. The walkover was focussed on the outfall locations in Timoleague and Courtmacsherry and the southern shore of Courtmacsherry Bay between the two villages.

The primary outfall in Timoleague is located at the south-east of the village next to Abbey Bridge and across the road from Timoleague Abbey. An unpleasant smell is evident from across the road and raw sewage is clearly visible at the outfall pipe and on the shoreline below the pipe. One of the secondary discharge outfall pipes to the west of Abbey Bridge is also clearly visible and raw sewage was again evident at this location. The two outfall pipes to the north of Abbey Bridge were not visible close to low tide.

The primary outfall at Courtmacsherry is located in the centre of this linear village approximately 180 m west of the pier. It is not visible as it discharges in deep water. The secondary discharge outfall on the west side of Courtmacsherry is visible as a long pipe protruding into a small sheltered bay.

Wintering waders and wildfowl begin to depart from their Irish wintering grounds from mid-February onwards and the majority of birds have returned to their breeding grounds by late

March. By mid-April few wintering birds remain but small numbers of some species (e.g. non-breeding Black-tailed Godwit) remain on Irish estuaries throughout the summer months. In addition, migrating species such as Whimbrel (*Numenius phaeopus*) and Sandwich Tern (*Sterna sandvicensis*) stop off on passage to feed for a few days. A total of 330 waterbirds of 19 species were seen at three locations on the south side of Courtmacsherry Bay during the walkover survey:

Timoleague: 12 Mute Swans (*Cygnus olor*), 10 Mallards (*Anas platyrhynchos*), 1 Cormorant (*Phalacrocorax carbo*), 2 Little Egrets (*Egretta garzetta*), 1 Grey Heron (*Ardea cinerea*), 26 Oystercatchers (*Haematopus ostralegus*), Common Sandpiper (*Actitis hypoleucos*), 2 Redshanks (*Tringa totanus*), 1 Greenshank (*Tringa nebularia*), 22 Black-tailed Godwits (*Limosa limosa*), 2 Whimbrels, 54 Herring Gulls (*Larus argenteus*) and 6 Lesser Black-backed Gulls (*Larus fuscus*).

South Shore: 33 Shelducks (*Tadorna tadorna*), 3 Teal (*Anas crecca*), 2 Curlews (*Numenius arquata*), 15 Whimbrels, 2 Herring Gulls and 5 Great Black-backed Gulls (*Larus marinus*).

Courtmacsherry: 1 Great Northern Diver (*Gavia immer*), 1 Cormorant, 98 Oystercatchers, 1 Curlew, 2 Whimbrel, 13 Herring Gulls, 7 Great Black-backed Gulls and 7 Sandwich Terns.

The macroalgae Sea Lettuce (*Ulva spp*.) was clearly visible in its early stages of growth along many sections of the mudflats on the southern side of the bay. Sea Lettuce is a naturally occurring alga found in estuaries around the Irish coast. Sea Lettuce grows advantageously in situations where nutrient levels (Nitrogen in particular) are artificially high and it proliferates to form dense algal mats that can seriously alter and jeopardise the ecological composition of an estuary (Lopes *et al*. 2010). Accumulations of Sea Lettuce have been recorded at several locations in Ireland since the early 1990s *e.g*. Dublin Bay, Clonakilty Bay and Belfast Lough. Sea Lettuce has become a serious problem in Courtmacsherry Bay with potentially negative impacts on leisure activities, tourism and ecology in the bay (Sea Lettuce Task Force 2010). Algal mats formed by accumulations of Sea Lettuce can result in serious reductions of invertebrate populations and this in turn can have negative consequences for some bird species. Furthermore, the presence of large amounts of decaying algae in the winter months increases BOD levels in the estuary (Burton *et al* 2002).

Description of the Natura 2000 Sites Affected

Courtmacsherry Estuary SAC

This site is located in West Cork, some 12 km south of Bandon and immediately east of the village of Timoleague. The Estuary consists of the drowned valley of the Argideen River, which is now filled with sediments, resulting in an extensive mudflat. The site contains a complex of coastal habitats including ten habitats listed on Annex I of the EU Habitats Directive.

Most of the mudflat is unvegetated, although in places Cord-grass (Spartina sp.) occurs. Saltmarsh has developed in a number of areas, the abundant species mostly being Sea Club-rush (*Scirpus maritimus*), Common Scurvygrass (*Cochlearia officinalis*), Sea Arrowgrass (*Triglochin maritima*), Sea Plantain (*Plantago maritima*), Thrift (*Armeria maritima*) and Saltmarsh Rush (*Juncus gerardi*). On the outer edges such species as Greater Sea-spurrey (*Spergularia media*), Lesser Sea-spurrey (S.marina) and Lax-flowered Sea-lavender (*Limonium humile*) occur, while on their landward edge of the saltmarsh frequently support Creeping Bent (Agrostis stolonifera), Red Fescue (Festuca rubra), Silverweed (*Potentilla anserina*), Soft Rush (Juncus effusus), Common Sorrel (*Rumex acetosa*) and others. A particularly well developed intact saltmarsh occurs at Garranefeen Strand. The site also includes small areas of sand dune, sandy and shingle beaches, reedbeds of Common Reed (*Phragmites australis*), scrub, dry grassland, and areas of both wet and dry seminatural broadleaved woodland, parts of which are dominated by species of Oak (Quercus sp.). Of note is the presence of the rare Red Data Book plant species, Seakale (*Crambe maritima*) on shingle, as well as the scarce grass, Tor-grass (*Brachypodium pinnatum*), on cliffs between Broadstrand and Wood Point. The occurrence of the EU priority habitat fixed dune is also of significance.

The spread of cord-grass on parts of the mudflats poses a threat to the quantity of the area for feeding birds and pollution is an ever-present threat in such a wetland.

Courtmacsherry Estuary is an important site for the complex of coastal habitats found there (including ten listed on Annex I of the EU Habitats Directive), and for the large numbers of birds that use the area (Source: NPWS, Site Synopsis 2000).

(Refer to http://www.npws.ie/sites/default/files/protected-sites/synopsis/SY001230.pdf for the full site synopsis).

Courtmacsherry Bay SPA

The site is a Special Protection Area (SPA), under the E.U. Birds Directive. The site is of special conservation interest for the following species: Great Northern Diver, Shelduck, Wigeon, Red-breasted Merganser, Golden Plover, Lapwing, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Black-headed Gull and Common Gull. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site is of ornithological importance for the wintering waders and wildfowl that feed on the mudflats. It supports internationally important numbers of Black-tailed Godwit (506 - figures given here and below are mean peaks for the five winters in the period 1995/96 to 1999/00), as well as nationally important numbers of a further eleven species, i.e. Great Northern Diver (27), Shelduck (175), Wigeon (934), Redbreasted Merganser (63), Golden Plover (5,759), Lapwing

(2,713), Dunlin (1,353), Bar-tailed Godwit (182), Curlew (1,357), Black-headed Gull (2,727) and Common Gull (2,226). Other species which occur include Oystercatcher (610), Redshank (227) and Greenshank (26).

Courtmacsherry Bay SPA is an important site for wintering birds. It holds internationally important numbers of Black-tailed Godwit and nationally important numbers of a further eleven species, including three that are listed on Annex I of the E.U. Birds Directive, i.e. Great Northern Diver, Golden Plover and Bar-tailed Godwit (Source: NPWS, Site Synopsis 2010)

According to the Natura 2000 Data Form for Courtmacsherry Bay SPA the key threat to the sites include: Eutrophication from surrounding farmland, the spread of Spartina (cord grasses) on the mudflats which may affect overwintering birds and increases in the amenity use of the area

(Refer to http://www.npws.ie/sites/default/files/protected-sites/synopsis/SY004219.pdf for the full site synopsis).

Description of the Conservation Interests of the SAC
Annex I Habitats
The qualifying habitats of the Courtmacsherry Estuary SAC are listed below:

[1130] Estuaries
[1140] Tidal Mudflats and Sandflats
[1210] Annual Vegetation of Drift Lines
[1220] Perennial Vegetation of Stony Banks
[1310] Salicornia Mud
[1330] Atlantic Salt Meadows
[1410] Mediterranean Salt Meadows
[2110] Embryonic Shifting Dunes
[2120] Marram Dunes (White Dunes)
[2130] Fixed Dunes (Grey Dunes)

Estuaries [1130]
Estuaries are coastal inlets where there is a significant freshwater influence. Pollution and fishing/aquaculture related activities affect habitat quality, particularly in some highly sensitive areas. The Overall Status is assessed as Inadequate but improving. These improvements and the assessment of Future Prospects as Favourable are due to the fact that these pressures are declining and are not considered to be a threat to habitat quality in the future. Estuaries are surface water and marine water dependent and is considered to be at risk from water pollution; specifically N and P nutrient enrichment (diffuse and point source) and BOD diffuse and point-source organic pollution (Western RBD / ESBI / Eleanor Mayes, 2008).

Tidal Mudflats and Sandflats [1140]
These sediment habitats are found between the low water and mean high water tide marks. The finer silt and clay sediments are dominant in mud flats and the larger sand particles are associated with areas exposed to greater wave forces. A range of physical pressures operate including significant changes in salinity, temperature, and exposure to air. Pollution, fisheries/aquaculture and diverse use of the foreshore are likely to affect habitat quality,

particularly eelgrass beds. Therefore, the Overall Status is assessed as Inadequate but improving. These improvements and the assessment of Future Prospects as Favourable are due to the fact that these pressures are declining and are not considered to be a threat to habitat quality in the future. This habitat type is marine water dependent and is considered to be at risk from N nutrient enrichment (diffuse and point-source nutrient pollution) (Western RBD / ESBI / Eleanor Mayes, 2008).

Annual Vegetation of Drift Lines [1210]
This type of vegetation occurs around the high tide mark at the upper part of the strand, where tidal litter accumulates. Tidal litter contains marine organic matter including seaweed, which provides nutrients for strandline vegetation. The overall status is assessed as Inadequate due to pressures associated with recreation (notably beach cleaning) and coastal defences, which can interfere with sediment dynamics. The Overall Status of this habitat is Inadequate due to on-going losses of the habitat primarily due to beach cleaning activities and coastal defences which can interfere with sediment dynamics.

This habitat type is a marine water dependent habitat, but is not considered to be at risk from water pollution (Western RBD / ESBI / Eleanor Mayes, 2008).

Perennial Vegetation of Stony Banks [1220]
This habitat occurs along the coast where shingle (cobbles and pebbles) and gravel have accumulated to form elevated ridges or banks above the high tide mark. Most of the rocky material should be less than 250 mm in diameter to be considered in this habitat category. The Overall Status is assessed as Inadequate due to pressures associated with recreation and coastal defences, which can interfere with sediment dynamics. The assessment was largely based on marginal sites associated with sand dune systems, and did not include large shingle banks. A more comprehensive assessment of shingle systems is required in the future to give a more reliable account of the total national resource and the conservation status of the habitat.

This habitat type is a marine water dependent habitat; however, it is not considered to be at risk from water pollution (Western RBD / ESBI / Eleanor Mayes, 2008).

Salicornia Mud [1310]
Salicornia and other annuals colonising mud and sand is a pioneer saltmarsh community that may occur on muddy sediment seaward of established saltmarsh, or form patches within other saltmarsh communities where the elevation is suitable and there is regular tidal inundation.

As this habitat is dominated by annuals it can be ephemeral or transient in nature and is highly susceptible to erosion. Its distribution can vary considerably from year to year and it can move in response to changing conditions, e.g. in estuaries with shifting river channels. The Overall Status is assessed as Inadequate due to pressures associated with the invasion and on-going spread of Common Cordgrass (*Spartina anglica*).

This habitat type is marine water dependent and is at risk from nutrient enrichment (N diffuse and point-source nutrient pollution) (Western RBD / ESBI / Eleanor Mayes, 2008).

Atlantic Salt Meadows [1330]
Atlantic salt meadows generally occupy the widest part of the saltmarsh gradient. They also contain a distinctive topography with an intricate network of creeks and salt pans occurring on medium to large sized saltmarshes. Atlantic salt meadows are distributed around most of the coastline of Ireland. The intricate topography of the Irish coastline with many inlets has created an abundance of sites that are sheltered and allow muddy sediments to accumulate, leading to the development of saltmarsh.

Although minor losses have been reported for this habitat they are considered negligible at a national level. The Overall Status is assessed as inadequate due mainly to ecologically unsuitable grazing levels impacting the condition of the habitat. There is unlikely to have been any recent decline in condition.

This habitat type is ground water and marine water dependent and at risk from nutrient enrichment (N diffuse and point-source nutrient pollution) (Western RBD / ESBI / Eleanor Mayes, 2008).

Mediterranean Salt Meadows [1410]
Mediterranean salt meadows occupy the upper zone of saltmarshes and usually occur adjacent to the boundary with terrestrial habitats. They are widespread on the Irish coastline; however they are not as extensive as Atlantic salt meadows.

The Overall Status is assessed as inadequate due mainly to ecologically unsuitable grazing levels impacting the condition of the habitat. There is unlikely to have been any recent decline in condition.

This habitat type is ground water and marine water dependent and at risk from nutrient enrichment (N diffuse and point-source nutrient pollution) (Western RBD / ESBI / Eleanor Mayes, 2008).

Embryonic Shifting Dunes [2110]
Embryonic shifting dunes are low sand mounds (generally less than a metre high) occurring between the high tide mark and the partially stabilised marram dunes. They are unstable habitats where wind-blown sand is common and they are still vulnerable to saltwater intrusion. They represent the initial phase of dune formation and typically form where sand gathers around salt-tolerant species This habitat can be very short-lived, as it is subject to natural erosion processes and susceptible to removal by storms or high tides. Although minor losses have been reported for this habitat they are considered negligible at a national level. The Overall Status is assessed as Inadequate due mainly to recreational pressures and coastal defences, which can interfere with the local sediment and wave dynamics. There is unlikely to have been any recent decline in condition.

This habitat type is not considered to be a water dependent habitat (Western RBD / ESBI / Eleanor Mayes, 2008).

Marram Dunes (White Dunes) [2120]
Marram dunes are partly stabilised and are dominated by Marram. They tend to be taller than embryonic shifting dunes and form further inland from these. The dunes are actively created by marram, which traps sand. The dunes can build and erode quickly because of the presence of bare sand, and they are sometimes referred to as mobile dunes.

The Overall Status is assessed as Inadequate due to pressures associated with recreation and coastal defences. Change in status since the 2007 report is due to alterations in the methods of assessment and does not represent genuine change on the ground. However for this dynamic habitat, natural losses which occur are not related to human activities, and these are not considered to represent deterioration in the conservation status.

This habitat type is marine water dependent but is not considered to be at risk from water pollution (Western RBD / ESBI / Eleanor Mayes, 2008).

Fixed Dunes (Grey Dunes) [2130]*
Fixed dunes are the more stabilised areas of dune systems located inland from mobile dune habitats, where the wind speed and the influence of tidal inundation and salt spray is reduced. As this area is relatively sheltered, sand mobility is greatly reduced, leading to the development of a more or less closed or 'fixed' carpet of vegetation.

Only very minor losses in habitat area have been recorded, and these losses have been compensated by larger gains due to accretion. The overall status is assessed as bad due to pressures associated with recreation and ecologically unsuitable grazing. The absence of adequate measures to address under grazing and the resulting encroachment of scrub and bracken could lead to a further reduction in the conservation value of the habitat in the future.

This habitat type is marine water dependent but is not considered to be at risk from water pollution (Western RBD / ESBI / Eleanor Mayes, 2008).

Table 1.0: Qualifying Habitats along Surveyed Stretch of the Courtmacsherry Estuary

Site	Qualifying Habitats	Immediate Present		Potential to be Present downstream of Surveyed Stretch
Courtmacsherry Estuary SAC	[1130] Estuaries	Upstream	Yes	Yes
		Downstream	Yes	
	[1140] Tidal Mudflats and Sandflats	Upstream	Yes	Yes
		Downstream	Yes	
	[1210] Annual Vegetation of Drift Lines	Upstream	No	Yes at Harbour View (Garranefeen Strand)*
		Downstream	No	
	[1220] Perennial Vegetation of Stony Banks	Upstream	No	Yes, at Broadstrand Bay*

Site	Qualifying Habitats	Immediate Present		Potential to be Present downstream of Surveyed Stretch
		Downstream	No	
	[1310] Salicornia Mud	Upstream	No	Yes, at Harbour View (Garranefeen Strand)*
		Downstream	No	
	[1330] Atlantic Salt Meadows	Upstream	Yes	Yes, at Harbour View (Garranefeen Strand)*
		Downstream	Yes	
	[1410] Mediterranean Salt Meadows	Upstream	Yes	Yes, at Harbour View (Garranefeen Strand)*
		Downstream	Yes	
	[2110] Embryonic Shifting Dunes	Upstream	No	Yes, at Harbour View (Garranefeen Strand)*
		Downstream	No	
	[2120] Marram Dunes (White Dunes)	Upstream	No	Yes, at Harbour View (Garranefeen Strand)*
		Downstream	No	
	[2130] Fixed Dunes (Grey Dunes)	Upstream	No	Yes, at Harbour View (Garranefeen Strand)*
		Downstream	No	

* Source: Conservation Objectives: Courtmacsherry Estuary SAC 001230. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 2014

Description of the Conservation Interests of the SPA
Annex II Birds and Qualifying Species and Habitats
Courtmacsherry Bay SPA is very important for the presence of a number of Annex II animal species and has been selected for the following Annex II species:

- Great Northern Diver *Gavia immer* [wintering]
- Shelduck *Tadorna tadorna* [wintering]
- Wigeon *Anas penelope* [wintering]
- Red-breasted Merganser *Mergus serrator* [wintering]
- Golden Plover *Pluvialis apricaria* [wintering]
- Lapwing *Vanellus vanellus* [wintering]
- Dunlin *Calidris alpina* [wintering]
- Black-tailed Godwit *Limosa limosa* [wintering]
- Bar-tailed Godwit *Limosa lapponica* [wintering]
- Curlew *Numenius arquata* [wintering]
- Black-headed Gull *Larus ridibundus* [wintering]
- Common Gull *Larus canus* [wintering]
- Wetlands and Waterbirds

Great Northern Diver
Great Northern Divers occur along the Irish coastline between September and April and are usually observed as single birds or small groups. They are the most numerous of the divers occurring in Ireland and are particularly abundant off the south, west and northwest coasts over the winter. Great Northern Divers occur along a variety of coastlines, particularly deeper bays and inlets, as well as shallow bays with sandy shores. They can forage up to 10 km offshore and numbers close to shore tend to be highest when winds blow onshore. They are Green-listed in Ireland. The European population has been assessed as Secure.

Shelduck
Shelduck breed in Ireland and these breeding birds are known to winter here but their numbers are augmented by wintering birds from Scandinavia and Northern Europe that begin to arrive in October and peak during December and January. Shelduck are Amber Listed in Ireland because of continuous slow declines and because over half of the wintering population is concentrated into ten or fewer sites.

Wigeon
The majority of wintering Wigeon in Ireland breed across northwest and northeast Europe as far as western Siberia. Birds begin to arrive in early autumn but peak in January. Wigeon have recently been Red Listed in Ireland due to long-term declines in the wintering population (>50%).

Red-breasted Merganser (Mergus serrator)
This species can be found in Ireland all year and is also a winter migrant from the Continent. This species nests on sheltered lakes and large rivers throughout the west and north of the country. They use a variety of nesting habitats, usually located beside fast-flowing rivers, large and small lakes, also along the coast, on islands and sea-loughs. During the winter months this species exclusively utilises brackish and marine waters, particularly in shallow protected estuaries, bays

and lagoons. This species is Green-listed in Ireland. The European population is regarded as Secure.

Golden Plover
A small number of Golden Plover breed in Ireland each summer but numbers greatly increase during the autumn months as large numbers arrive from Iceland and the Faroe Islands. This species is Red Listed in Ireland because the breeding population and the wintering population have experienced continual declines.

Lapwing
Lapwing breed in Ireland but their numbers have seriously declined in recent decades. Wintering birds begin to arrive from Central Europe in the autumn with a rapid build-up in October and these numbers can be substantially higher during cold spells in continental Europe. The species is Red Listed in Ireland due to serious (-85%) long-term declines in the breeding population and -40% long term declines in the wintering population.

Dunlin
A small but declining population of Dunlin breeds in northwest Ireland. These birds leave Ireland from mid-June but much larger numbers begin to arrive in August from Scandinavia, Russia and western Siberia and numbers peak in January. The numbers wintering in Ireland have been declining steadily also and because of this, the species has recently been Red Listed.

Black-tailed Godwit
A small number of Black-tailed Godwits breed in Ireland most years but the species is mainly a winter visitor and Ireland is an important wintering area for the Icelandic breeding population. Numbers tend to peak in September as some birds use Ireland as a staging ground before they migrate to southern Europe. Black-tailed Godwits are Amber Listed in Ireland because of their status as a rare breeding species but also due to the fact that Ireland plays host to more than 20% of the Icelandic breeding population. More than half of the wintering population is limited to fewer than ten sites.

Bar-tailed Godwit
Bar-tailed Godwits are winter visitors to Ireland and birds wintering here originate in arctic Scandinavia and Russia. Birds begin to arrive in September but numbers peak in January. The species is Amber Listed in Ireland because more than half of the wintering population is limited to fewer than ten sites.

Curlew
Curlews have undergone a catastrophic decline (-86%) as a breeding species in Ireland over the past three decades due to habitat destruction (afforestation and reclamation of marginal lands). Large numbers of Curlews from Scandinavia and Britain continue to winter in Ireland but these populations are also declining. The wintering population has also undergone severe declines (-51%) in many breeding countries and the species has been Red Listed as a result.

Black-headed Gull

Black-headed Gulls are widespread breeders in Ireland but the Irish population has declined in recent decades and this has been related to drainage of wetlands but also to predation by Mink. Large numbers continue to winter in Ireland and these birds originate in Britain, Scandinavia and continental Europe. This species is now Red Listed in Ireland due to a decline of -70% in the breeding population over the last three decades.

Common Gull

The Common Gull is a relatively localised breeding species despite its name. Colonies are mainly confined to the northwest and north of the country. There is a substantial influx of birds from Scotland, Iceland and Scandinavia during the winter months. This species is currently Amber Listed in Ireland due to long term declines in the breeding range.

Table 2.0: Qualifying Habitats along Surveyed Stretch of the Courtmacsherry Bay

Site	Qualifying Habitat	Observed or Signs of Habitat Presence		Potential to be Present Outside of Surveyed Stretch
Courtmacsherry Bay SPA	Wetlands	Upstream	Yes	Yes
		Downstream	Yes	

Table 3.0: Qualifying Species along Surveyed Stretch of Courtmacsherry Bay at Timoleague

Site	Qualifying Species	Observed or Signs of Species Presence		Suitable Habitat Present	
Courtmacsherry Bay SPA	Great Northern Diver	Upstream	No	Upstream	No
		Downstream	Yes	Downstream	Yes
	Shelduck	Upstream	No	Upstream	Yes
		Downstream	Yes	Downstream	Yes
	Wigeon	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes
	Red-breasted Merganser	Upstream	No	Upstream	No
		Downstream	No	Downstream	Yes
	Golden Plover	Upstream	No	Upstream	No
		Downstream	No	Downstream	Yes
	Lapwing	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes
	Dunlin	Upstream	No	Upstream	No
		Downstream	No	Downstream	Yes
	Black-tailed Godwit	Upstream	No	Upstream	Yes
		Downstream	Yes	Downstream	Yes
	Bar-tailed Godwit	Upstream	No	Upstream	No
		Downstream	No	Downstream	Yes
	Curlew	Upstream	No	Upstream	Yes
		Downstream	Yes	Downstream	Yes
	Black-headed Gull	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes
	Common Gull	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes
	Wetlands and Waterbirds	Upstream	Yes	Upstream	Yes
		Downstream	Yes	Downstream	Yes

Table 4.0: Qualifying Species along Surveyed Stretch of Courtmacsherry Bay at Courtmacsherry

Site	Qualifying Species	Observed or Signs of Species Presence		Suitable Habitat Present	
Courtmacsherry Bay SPA	Great Northern Diver	Upstream	No	Upstream	Yes
		Downstream	Yes	Downstream	Yes
	Shelduck	Upstream	Yes	Upstream	Yes
		Downstream	No	Downstream	Yes (Harbour View)
	Wigeon	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes (Harbour View)
	Red-breasted Merganser	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes
	Golden Plover	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes (Harbour View)
	Lapwing	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes (Harbour View)
	Dunlin	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes (Harbour View)
	Black-tailed Godwit	Upstream	Yes	Upstream	Yes
		Downstream	No	Downstream	Yes (Harbour View)
	Bar-tailed Godwit	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes (Harbour View)
	Curlew	Upstream	Yes	Upstream	Yes
		Downstream	Yes	Downstream	Yes
	Black-headed Gull	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes
	Common Gull	Upstream	No	Upstream	Yes
		Downstream	No	Downstream	Yes
	Wetlands and Waterbirds	Upstream	Yes	Upstream	Yes
		Downstream	Yes	Downstream	Yes

Conservation Objectives of the Natura 2000 sites

Article 6 of the Habitats Directive states that:

> *Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives.*

The importance of a site designated under the Habitats Directive is defined by its qualifying features or interests. Qualifying interests for any Natura 2000 site are listed on a *pro forma*, called the Natura 2000 standard data form, which forms the basis of the rationale behind designation, and informs the Conservation Management Plan for targeted management and monitoring of key species and habitats.

Courtmacsherry Estuary SAC
Overall Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

- [1130] Estuaries
- [1140] Tidal Mudflats and Sandflats
- [1210] Annual Vegetation of Drift Lines
- [1220] Perennial Vegetation of Stony Banks
- [1310] Salicornia Mud
- [1330] Atlantic Salt Meadows
- [1410] Mediterranean Salt Meadows
- [2110] Embryonic Shifting Dunes
- [2120] Marram Dunes (White Dunes)
- [2130] Fixed Dunes (Grey Dunes)

Courtmacsherry Bay SPA
Overall Objective: To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SPA has been selected:

- Great Northern Diver *Gavia immer* [wintering]
- Shelduck *Tadorna tadorna* [wintering]
- Wigeon *Anas penelope* [wintering]
- Red-breasted Merganser *Mergus serrator* [wintering]
- Golden Plover *Pluvialis apricaria* [wintering]
- Lapwing *Vanellus vanellus* [wintering]
- Dunlin *Calidris alpina* [wintering]
- Black-tailed Godwit *Limosa limosa* [wintering]
- Bar-tailed Godwit *Limosa lapponica* [wintering]
- Curlew *Numenius arquata* [wintering]
- Black-headed Gull *Larus ridibundus* [wintering]
- Common Gull *Larus canus* [wintering]
- Wetlands and Waterbirds

The favourable conservation condition of the above species and habitats are defined by a number of species and habitats site specific attributes and targets which are details in the following documents:

- NPWS (2014) Conservation Objectives: Courtmacsherry Bay SPA 004219. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

- NPWS (2014) Conservation Objectives: Courtmacsherry Estuary SAC 001230. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.

Impact Prediction

Impacts on Water Quality

The aquatic conservation interests of the Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA are directly dependent on the aquatic environment of the Argideen Estuary/Courtmacsherry Bay. As the discharges from the Courtmacsherry and Timoleague agglomeration discharge effluent directly into the Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA, there is a connection between the discharges and the ecological receptors in the receiving SAC and SPA.

As mentioned previously the current wastewater effluent from the Timoleague and Courtmacsherry agglomeration discharge practically untreated into the Argideen Estuary and Courtmacsherry harbour respectively. While the flows from Courtmacsherry pass through a septic tank prior to discharge, the degree of treatment which they receive is considered to be relatively minor due to the population loading for which the system now caters. It is therefore considered that the flows from both Timoleague and Courtmacsherry are having a negative impact on the water quality in Argideen Estuary/Courtmacsherry Harbour and contributing to the prevalence of opportunistic algae within this body of water.

In terms of the UWWT Status 2013 both Courtmacsherry and Timoleague are classed as “Fail” due to lack of secondary treatment in operation.

Cumulative water quality impacts, which may impact the Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA and hence the water dependent qualifying habitats and species, may result from the following:

- Chemical fertiliser application to agricultural lands (the main fertilisers in use supply nitrogen, phosphorus, potassium and sulphur)
- Agricultural practices such as ploughing leads to greater mineralisation and nitrification, and in the case of old grassland, it can result in an increase in the release of nitrogen over a number of years (OECD, 1986)
- Artificial drainage increases nitrate leaching and reduce the morphological qualities of watercourses, thereby reducing the quality of habitat for flora and fauna
- Forestry may alter water quality indirectly through increased evaporation losses and hence an increase in solute concentrations
- On-site wastewater treatment systems, poorly performing septic tank units and other small effluent systems can be significant sources of nutrients to rivers.
- Point pressures including Section 4 licenced facilities and IPPC licenced facilities
- Peat siltation due to peat harvesting, over-grazing by sheep leading to erosion and forestry practices in the hills during planting and harvesting operations

In summary, the discharge from the Timoleague and Courtmacsherry agglomeration is impacting the water quality of the Argideen Estuary/Courtmacsherry Harbour. Therefore the discharges have the potential to impact upon the water dependent qualifying interests of Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA.

Impacts on Annex I Habitats

Estuaries [1130]

The main threats to estuaries in Ireland are related to water quality issues expressed through nutrient enrichment (N and P), accelerated growth of macroalgae/phytoplankton or reduced concentrations of dissolved oxygen and fishing/aquaculture related activities (NPWS, 2013). Elevated levels of nutrients (e.g. Nitrogen) over an extended period could have an effect on the ecology of the intertidal areas which provide food sources for many of the birds listed for the overlapping SPA. Courtmacsherry Bay is already showing advanced signs of eutrophication and large parts of the bay are covered with Sea Lettuce each summer and autumn. Sea Lettuce is particularly prevalent on the southern half of the estuary (Sea Lettuce Task Force 2010) and early growth was clearly visible along the south shore during the walkover survey. The proliferation of Sea Lettuce and the formation of algal mats throughout the estuary can have serious negative impacts on the biology of the estuary (invertebrates, fish and birds) as well as the physical environment.

Tidal Mudflats and Sandflats [1140]

Muddy sands have low resistance to de-oxygenation and inorganic nutrient enrichment (Crowe *et al.* 2011). Elevated levels of nutrients over an extended period could have an effect on the ecology of the intertidal areas which provide food sources for many of the birds listed for the overlapping SPA. Sea Lettuce can have significant effects on the microbiology and chemistry of the mudflats (Lopes *et al 2006*) with potentially serious impacts on qualifying species that depend on organisms in the mud to sustain them through the winter. Algal mats can effectively blanket the sediments in mudflats and sandflats resulting in anoxic conditions in the upper sediment layers and can lead to the demise of many invertebrate species (Lewis & Kelly 2001).

Annual Vegetation of Drift Lines [1210]

This habitat exists in a state of instability and the main threats are related to human activities such as beach-cleaning and coastal defence work. The habitat thrives on the accumulation of organic litter and consequently Courtmacsherry and Timoleague is likely to contribute positively to this habitat type.

Perennial vegetation of stony banks [1220]

The main threats to this habitat in Ireland are related to extraction of sand and gravel (NPWS, 2013). This is a marine water dependent habitat but is not considered to be at risk from nutrient pollution (Western RBD / ESBI / Eleanor Mayes, 2008) and therefore this habitat is not likely to be impacted by the WwTP discharges.

Salicornia Mud [1310]

The main threat to this habitat in Ireland is the spread of Common Cordgrass (*Spartina anglica)* an invasive species of saltmarsh and mudflats. Eutrophication from sewage discharges has been recorded as having negative impacts on this habitat at two locations in Ireland (NPWS, 2013) and the favourable conservation condition of this habitat may be threatened by the current inadequate treatment facilities at Courtmacsherry and Timoleague which is contributing to increased nutrient levels in Bay. Sewage effluent is known to cause dieback of saltmarsh vegetation and it can promote the growth and spread of Common Cordgrass and Common Reed (McCorry & Ryle 2009).

Atlantic Salt Meadows [1330]
Grazing and infilling are seen as the major threats to this habitat along with climate change resulting in increasing sea-levels and an increase in the severity of coastal storms. Sewage effluent is known to cause dieback of saltmarsh vegetation and it can promote the growth and spread of Common Cordgrass and Common Reed (McCorry & Ryle 2009).

Mediterranean Salt Meadows [1410]
Grazing, infilling and the effects of climate change are recognised to be the greatest threats to this habitat in Ireland. Sewage effluent is known to cause dieback of saltmarsh vegetation and it can promote the growth and spread of Common Cordgrass and Common Reed (McCorry & Ryle 2009).

Embryonic Shifting Dunes [2110]
This is a terrestrial habitat and it is not impacted by the discharges from the Courtmacsherry and Timoleague agglomeration.

Marram Dunes (White Dunes) [2120]
This is a terrestrial habitat and it is not impacted by the discharges from the Courtmacsherry and Timoleague agglomeration.

Fixed Dunes (Grey Dunes) [2130]
This is a terrestrial habitat and it is not impacted by the discharges from the Courtmacsherry and Timoleague agglomeration.

Table 5.0: Qualifying Habitats Potentially Impacted by Courtmacsherry and Timoleague Discharges

Qualifying Habitats	Potential Impacts	Brief Explanation	Mitigation required
[1130] Estuaries	Yes	Eutrophication from N and P enrichment	Yes
[1140] Tidal Mudflats and Sandflats	Yes	Eutrophication from N and P enrichment	Yes
[1210] Annual Vegetation of Drift Lines	No	Not considered to be at risk from water pollution.	No
[1220] Perennial Vegetation of Stony Banks	No	Not considered to be at risk from water pollution.	No
[1310] Salicornia Mud	Yes	At risk from nutrient enrichment (N diffuse and point-source nutrient pollution)	Yes
[1330] Atlantic Salt Meadows	Yes	At risk from nutrient enrichment (N diffuse and point-source nutrient pollution)	Yes
[1410] Mediterranean Salt Meadows	Yes	At risk from nutrient enrichment (N diffuse and point-source nutrient pollution)	Yes

Qualifying Habitats	Potential Impacts	Brief Explanation	Mitigation required
[2110] Embryonic Shifting Dunes	No	Not considered to be at risk from water pollution	No
[2120] Marram Dunes (White Dunes)	No	Not considered to be at risk from water pollution	No
[2130] Fixed Dunes (Grey Dunes)	No	Not considered to be at risk from water pollution	No

Impacts on Annex II Species

It is likely that nutrient delivery via the effluent discharges (and other sources such as agriculture) has led to increased nutrient levels accumulating in the sediments of the Argideen Estuary which in turn leads to increases in certain invertebrate populations which attract large numbers of wetland birds to feed on the abundant food source. Sewage outfalls are widely known to provide significant food sources for a variety of bird species either directly as a source of edible matter or indirectly by artificially enhancing nutrient availability (Burton *et al.* 2002).

Excessive discharge of nutrients may have short-term positive impacts on some bird populations but in the long-term, excessive accumulation of nutrients is likely to be detrimental to habitats within the SPA and could well threaten the survival of important invertebrate populations which will have serious negative implications for several of the designated bird species within the SPA. Sediments close to sources of nutrient and organic enrichment eventually become anaerobic due to the high biological oxygen demand (BOD) and may in extreme cases become unsuitable for invertebrate life and this can result in a loss of foraging habitat for wintering water birds (Burton et al. 2002). High nutrient loading can also result in excessive algal growth which can lead to oxygen depletion and reductions in the availability of vital invertebrate food.

Cleaner wastewater treatment is likely to result in lower nutrient levels with consequent reductions in the abundance of certain invertebrate species and this may impact on bird populations in the immediate area.

Failure to address the problem of excessive nutrients entering a waterbody leads to eutrophication resulting in an ecological imbalance due to excessive algae growth. This phenomenon has already occurred in several estuaries along the south coast including the Argideen Estuary where excessive growth of Sea Lettuce (*Enteromorpha* spp.) is jeopardizing environmental conditions for important invertebrate species with likely negative consequences for large numbers of wetland birds at these sites (Sea Lettuce Task Force Report, 2010).

Great Northern Diver (Gavia immer) [A003]

Great Northern Divers feed on fish, crustaceans and squid and they are not likely to be directly impacted by Courtmacsherry and Timoleague discharges but the large scale disintegration of algal mats in the winter months may be impeding their ability to forage. The species occurs further offshore than many diver species so obtaining counts and estimating population size is difficult. However, they tend to come closer to shore and into sheltered estuaries during periods of bad weather. They have declined in the bay and no longer reach nationally important numbers of >20 (Boland & Crowe 2012).

Shelduck (Tadorna tadorna) [A048]
Shelduck are sensitive to sewage effluent possibly due to declines in prey densities in areas blanketed by algal mats (Burton *et al* 2002). Shelduck numbers have declined in the bay and no longer reach nationally important numbers of >150 (Boland & Crowe 2012).

Wigeon (Anas Penelope) [A050]
Wigeon are largely vegetarian and feed chiefly on land or exposed mud (Prater, 1981) so they are unlikely to be impacted by Courtmacsherry and Timoleague discharges.

Red-breasted (Merganser Mergus serrator) [A069]
Red-breasted Mergansers are mainly fish eaters and they are not likely to be directly impacted by Courtmacsherry and Timoleague discharges but the large scale disintegration of algal mats in the winter months may be impeding their ability to forage.

Golden Plover (Pluvialis apricaria) [A140]
Golden Plovers are not a typical estuarine species and they tend to feed on permanent pastures and ploughed fields but they do use coastal areas for roosting, in hard weather and on passage (Prater 1981). Courtmacsherry and Timoleague discharges are not likely to have a significant impact on this species apart from the potential loss of roosting areas due to the accumulation of algal mats in the autumn and early winter. Golden Plover numbers have declined in the bay and no longer reach nationally important numbers of >1700 (Boland & Crowe 2012).

Lapwing (Vanellus vanellus) [A142]
Lapwings also tend to feed on agricultural land and largely use coastal areas for roosting. Courtmacsherry and Timoleague discharges are not likely to have a significant impact on this species apart from the potential loss of roosting areas due to the accumulation of algal mats in the autumn and early winter. Lapwing numbers have declined in the bay and no longer reach nationally important numbers of >2100 (Boland & Crowe 2012).

Dunlin (Calidris alpine) [A149]
Dunlin can be seriously affected by the occurrence of macroalgal blooms and declines in their numbers have been recorded at sites with corresponding increases in the number and density of algal mats. Prey density, detectability and accessibility are all affected by the widespread presence of algal mats (Lopes *et al.* 2006).

Black-tailed Godwit (Limosa limosa) [A156]
A study in nearby Clonakilty Bay (Lewis & Kelly 2001) has shown that Black-tailed Godwits tend to concentrate in areas without algal mats as the presence of algae may interfere with the probing action used by this species when foraging.

Bar-tailed Godwit (Limosa lapponica) [A157]
Bar-tailed Godwits tend to prefer the sandy parts of estuaries where they feed on the tidal edge. Algal mats are likely to interfere with their foraging but possibly not to the same extent as with Black-tailed Godwits. Nevertheless, declines in Bar-tailed Godwit numbers at some British estuaries have been attributed to the presence of algal mats (Burton *et al.* 2002).

Curlew (Numenius arquata) [A160]
Curlews use their long curved bills to probe for ragworms and they are likely to be hindered by the presence of algal mats. Declines in Curlew numbers at British estuaries have been attributed to the presence of algal mats (Burton *et al.* 2002).

Black-headed Gull (Larus ridibundus) [A179]
Gulls are opportunistic feeders and Black-headed Gulls frequently forage at WwTP outfalls. They undoubtedly benefit from artificial food sources (Burton *et al* 2002) supplied by WWTPs. Therefore, the discharges are unlikely to be negatively impacting this species.

Common Gull (Larus canus) [A182]
Common Gulls frequently forage at WwTP outfalls. They undoubtedly benefit from artificial food sources (Burton *et al* 2002) supplied by WWTPs. Therefore, the Courtmacsherry and Timoleague discharges are unlikely to be negatively impacting this species.

Wetlands and Waterbirds [A999]
The accumulation of algal mats on the mudflats and sandflats within the estuary can have negative impacts on a range of wetland bird species as a result of declines in favoured prey species and difficulties in gaining access to prey buried beneath the algal mats. The accumulation of large amounts of algae can have negative impacts on invertebrate populations in coastal habitats.

Table 6.0: Qualifying Species Potentially Impacted by the Courtmacsherry and Timoleague Wastewater Effluent Discharges

Qualifying Species	Potential Impact	Brief Explanation	Mitigation Required
Great Northern Diver	Yes	The fragmentation of algal mats may hinder foraging ability.	Yes
Shelduck	Yes	Algal mats may result in a reduction of prey species.	Yes
Wigeon	No	Wigeon diet is almost entirely vegetable matter and they may benefit from the presence of algae.	No
Red-breasted Merganser	Yes	The fragmentation of algal mats may hinder foraging ability.	Yes
Golden Plover	Yes	The presence of large areas of algal mats may obstruct roosting areas.	Yes
Lapwing	Yes	The presence of large areas of algal mats may obstruct roosting areas.	Yes
Dunlin	Yes	Algal mats inhibit access to prey and may result in a reduction of prey density and species.	Yes
Black-tailed Godwit	Yes	Algal mats inhibit access to prey and may result in a reduction of prey density and species.	Yes
Bar-tailed Godwit	Yes	Algal mats inhibit access to prey and may result in a reduction of prey density and species.	Yes

Qualifying Species	Potential Impact	Brief Explanation	Mitigation Required
Curlew	Yes	Algal mats inhibit access to prey and may result in a reduction of prey density and species.	Yes
Black-headed Gull	No	Algal mats do not appear to have negative effects on gulls.	No
Common Gull	No	Algal mats do not appear to have negative effects on gulls.	No
Wetlands and Waterbirds	Yes	Algal mats can physically alter wetland habitats, inhibit access to prey and may result in a reduction of prey density and species.	Yes

Mitigation Measures

The effluent discharges from the Courtmacsherry and Timoleague agglomeration are contributing to nutrient enrichment within the receiving waterbody. The Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA contain a wide range of designated habitats and species which may be impacted by the wastewater effluent discharges.

Mitigation Measures recommended for the ongoing operation of the existing discharge are as follows:

- Provision of a new WWTP to cater for effluent discharges for Courtmacsherry and Timoleague designed to operate in compliance with existing legislative and regulatory standards. This will improve the water quality of the Argideen Estuary/Courtmacsherry Harbour and help to protect the Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA.
- Monitoring of the effluent discharge and ambient monitoring of the receiving waterbody on a regular basis.
- With regard to the cumulative impacts of the Courtmacsherry and Timoleague discharges as a whole and the operational impacts, the waste water discharge effluent standards must be in line with the Urban Waste Water Treatment Regulations, 2001.

Stage 2 Appropriate Assessment Conclusion Statement

The current assessment for the Waste Water Discharge Licence Application investigates the potential adverse effects on the aquatic qualifying interests of the Natura 2000 network, specifically the Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA, arising from the discharges from the Courtmacsherry and Timoleague agglomeration, in combination with other plans/projects affecting the aquatic environment.

The assessment considers whether the discharge, alone or in combination with other projects or plans, will have adverse effects on the integrity of the Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA, and includes any mitigation measures necessary to avoid, reduce or offset negative effects.

When the above mitigation measures are implemented in full, it is envisaged that there will be no significant adverse effects on the integrity of the Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA, in view of the conservation objectives of the sites and that the conservation status of the Annex II species and Annex I Habitats will not be compromised by the discharges either directly, indirectly or cumulatively.

It is concluded that the discharges from the Courtmacsherry and Timoleague agglomeration, alone or in-combination with other plans and/or projects will not give rise to significant effects on the integrity of the Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA, as long as the mitigation measures as listed above are implemented in full. This Stage 2 assessment concludes the Appropriate Assessment process and further assessment is not considered necessary.

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