

OFFICE OF ENVIRONMENTAL SUSTAINABILITY

INSPECTORS REPORT ON A WASTE WATER DISCHARGE LICENCE APPLICATION

To: Eimear Cotter, Director

Yvonne English Environmental Licensing Programme

Date: 23/02/2018

From:

Application for a Waste Water Discharge Licence from Irish Water, for the agglomeration named Courtmacsherry and Timoleague, Reg. No. D0294-02.

Application & Agglomeration Details		
Agglomeration Name:	Courtmacsherry and Timoleague (Appendix 1)	
County:	County Cork	
Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of 1,001 to 2,000.	
Licence application received:	14/09/2016	
Notices under Regulation 12 ¹ issued:	7/10/2016	
Information under Regulation 12 received:	17/10/2016	
Notices under Regulation 18(3)(b) issued:	12/01/2018	
Information under Regulation 18(3)(b) received:	23/01/2018	
Site notice check:	3/11/2016	
Submission(s) Received:	3 – 4/10/2016, 28/10/2016, 7/11/2016	
Design Population Equivalent:	500	
Actual Population Equivalent:	1,490	
Type of treatment:	Primary	
Wastewater treatment plant (WWTP) description:	The Courtmacsherry area consists of two septic tanks.	
	The Timoleague area currently has no treatment.	

The existing WWTP in Courtmacsherry consists of two septic tanks. The main septic tank is located near the centre of the village and is designed to cater for 500 population

¹ Waste Water Discharge (Authorisation) Regulations, 2007, as amended.

equivalent (p.e.). This septic tank is grossly overloaded. The second septic tank is located at the western end of the village and currently serves 15 houses.

The Timoleague area has a very old wastewater collection system and no form of WWTP in place. The collection system discharges untreated waste water directly into the Ardigeen Estuary via five outfalls.

It is proposed to construct a new secondary WWTP for the Courtmacsherry Timoleague agglomeration. This WWTP will be designed to cater for 2,500 p.e. It is anticipated that appointment of the contract to upgrade the Courtmacsherry Timoleague agglomeration and construct of a new WWTP will be finalised by the end of March 2018. It is estimated by Irish Water that the new WWTP will be fully constructed and operational by 31/12/2019.

1. Discharges to waters

The following table outlines the main considerations in relation to discharges to waters from this agglomeration.

Primary discharge point		
Receiving water name	Argideen Estuary	
Type of receiving water	Transitional	
Normal flow	275 m³/day	
Maximum flow	825 m³/day	
Secondary discharge point(s) Note 1		
Number of Secondary discharge points	Six	
Receiving water name	Argideen Esturay	
Type of receiving water(s)	Transitional	
Storm water overflow(s)		
Storm water overflow(s)	Yes (1 existing and 3 proposed)	
Receiving water name(s)	Argideen Estuary	

Table 1: Discharges to waters

Note 1: There are currently six secondary discharge points within the agglomeration. These secondary discharges will be decommissioned upon the construction and the operation of the proposed new WWTP by 31/12/2019. The combined flow from all the secondary discharge points is approximately 45 m³/day.

Schedule A: Discharges & Discharge Monitoring of the recommended licence (RL) specifies the Emission Limit Values (ELVs) to which the discharge from the Courtmacsherry Timoleague agglomeration must conform. Monitoring of the discharges will take place as per this schedule of the RL.

There is a large variation noted between the normal and maximum flows recorded from the primary discharge point. This variation can be attributed to the combined nature of the collection network.

2. Receiving waters and impact

The following table summarises the main considerations in relation to the Argideen Estuary downstream of the primary discharge.

Characteristic	Classification	Comment
Receiving water name	Argideen Estuary	(WFD Code: IE_SW_090_0200)
Designations	Courtmacsherry Estuary SAC	Site code: 001230
	Courtmacsherry Bay SPA	Site Code: 004219
	AR005_DS Spittal Bridge (EPA TW Code: TW05003171AR1011)	4.7 km upstream of SW001 in the Argideen Estuary
Receiving water monitoring stations	AR000 – River Argideen at Inchy bridge (EPA TW Code: TW05003171AR1001)	6.5 km upstream of SW001 in the Argideen Estuary
	AR080 Courtmacsherry beach (EPA TW Code: TW05003171AR1009)	1 km downstream of SW001 in the Argideen Estuary
Transitional water quality	Eutrophic	
WFD status	Poor	Restore to Good Status by 2021

Table 2: Receiving waters

The South Western River Basin District Transitional and Coastal Waters Action Programme lists the Argideen Estuary as a waterbody at risk from land based point source pressures and the Skibbereen Clonakilty Water Management Unit Action Plan identifies the Courtmacsherry Timoleague waste water treatment works as a point source potentially putting the waterbody at risk.

In the European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended, the key water parameters for the protection of transitional waters are BOD and orthophosphate (MRP). In accordance with these Regulations, the standard for good status of BOD in transitional waters is 4.0 mg/l, and the standard for orthophosphate in transitional waters (at salinity of 27 psu) is \leq 0.049 mg/l.

Due to potential issues with nitrogen and phosphorus in the Argideen Estuary, the RL, as drafted, has set emission limit values for total oxidised nitrogen and ammonia and orthophosphate. The standard for Good status of Dissolved Inorganic Nitrogen (DIN)² in coastal receiving waters is ≤ 0.25 mg/l in accordance with European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended.

The population equivalent of the agglomeration is below the 2,000 p.e. threshold at which the ELVs specified in Part 1 of the second schedule of the Urban Wastewater Treatment Regulations, 2001, as amended, apply.

For agglomerations under this threshold, "*appropriate treatment*" is required.

Article 7 of Directive 91/271/EC³ requires that urban waste water entering collection systems shall, before discharge, be subject to appropriate treatment, as defined in Article 2(9), for discharges to freshwater and estuaries from agglomerations of less than 2,000 p.e.. The term 'appropriate treatment' is defined in the Directive as '*treatment of urban waste water by any process and/or disposal system which after*

² DIN is the sum of the concentrations of nitrate, nitrite and ammonia.

³ Council Directive of 21 May 1991 concerning urban waste water treatment.

discharge allows the receiving waters to meet the relevant quality objectives and the relevant provisions of the Directive and of other Community Directives'.

It is considered that the level of treatment being proposed (secondary) for this agglomeration is appropriate.

The RL has set emission limit values (ELVs) at the primary discharge point of 25 mg/l for cBOD, 125 mg/l for chemical oxygen demand (COD), 35 mg/l for suspended solids (SS). These limits are in accordance with UWWT Regulations, 2001, as amended. These limits shall apply from date of grant of licence.

The RL has set a limit of 8 mg/l for orthophosphate, 15mg/l for total oxidised nitrogen and 10 mg/l for ammonia at the primary discharge point in accordance with the requirements of the European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended. These ELVs will apply from 1/1/2020.

There are currently six secondary discharge points within the agglomeration. These secondary discharges will be decommissioned upon the construction and the operation of the proposed new WWTP by 31/12/2019. The combined flow from all the secondary discharge points is approximately 45 m³/day. The RL as drafted has set emission limit values (ELVs) of 25 mg/l for cBOD, 125 mg/l for chemical oxygen demand (COD), 35 mg/l for suspended solids (SS) on all the secondary discharge points. These limits are in accordance with UWWT Regulations, 2001, as amended.

It is considered that the proposed new secondary treatment plant for Courtmacsherry Timoleague will be capable of meeting these emission limit values.

3. Ambient Monitoring

Schedule B: Ambient Monitoring of the RL specifies the parameters, analysis method and frequency for which ambient monitoring of the primary discharge shall be carried out. The requirements for ambient monitoring in *Schedule B: Ambient Monitoring* are sufficient to monitor for potential impacts on the status of the receiving water as a result of the discharge.

4. Combined Approach

The Waste Water Discharge (Authorisation) Regulations, 2007, as amended, specify that a 'combined approach' in relation to licensing of waste water works must be taken, whereby the emission limits for the discharge are established on the basis of the stricter of either or both, the limits and controls required under the Urban Waste Water Treatment Regulations, 2001, as amended, and the limits determined under statute or Directive for the purpose of achieving the environmental objectives established for surface waters, groundwater or protected areas for the water body into which the discharge is made. The RL as drafted gives effect to the principle of the Combined Approach as defined in Waste Water Discharge (Authorisation) Regulations, 2007, as amended.

5. **Programme of Improvements**

There is a programme of improvements in place for the agglomeration. The RL as drafted requires the appropriate improvements to ensure compliance with the emission limit values as set out in *Schedule A: Discharges and Discharge Monitoring*, of the RL by 31/12/2019; improvement works to ensure compliance with Condition 1.7 of the RL by 31/12/2019. Condition 1.7 states that the licensee shall maintain such available capacity within the waste water works as is necessary to ensure that there is no environmental risk posed to the receiving water environment as a result of the

discharges. *Schedule C: Specified Improvement Programme* of the RL as drafted also requires six secondary discharges to be decommissioned and discontinued by 31/12/2019.

6. Compliance with EU Directives

In considering the application, regard was had to the requirements of Regulation 6(2) of the Waste Water Discharge (Authorisation) Regulations, 2007, as amended, notably:

Compliance with Directives/Regulations	Description and Conditions in RL
Urban Waste Water Treatment Directive [91/271/EEC]	Not compliant in 2016
Water Framework Directive [2000/60/EC]	Good status to be achieved by 2021
EC Environmental Objectives (Surface Water) Regulations 2009 (S.I. No. 272 of 2009), as amended	Schedule A of RL sets ELVs to contribute towards achieving the environmental quality objectives.
Bathing Water Directive [2006/7/EC]	Coolamaine bathing water had good water quality in 2016.
Dangerous Substances Directive [2006/11/EC]	Condition 4 requires screening for priority substances.
Environmental Impact Assessment Directive [85/337/EEC]	An EIS was not required for the Courtmacsherry Timoleague WWTP.

Table 4: Compliance with EU Directives/Regulations

Birds Directive [2009/147/EC] & Habitats Directive [92/43/EEC]

The Courtmacsherry Timoleague WWTP discharges directly into the Courtmacsherry Estuary SAC⁴. The site is protected for priority habitats listed under Annex 1 of the Habitats Directive. It is also selected for protection of species listed under Annex II of the same directive. The site is also designated an SPA⁵, Courtmacsherry Bay SPA, under the Birds Directive for the conservation of wild birds.

Appendix 2 lists the European Sites assessed, their associated qualifying interests and conservation objectives along with the assessment of the effects of the activity on the European Sites.

A screening for Appropriate Assessment was undertaken to assess, in view of best scientific knowledge and the conservation objectives of the site, if the activity, individually or in combination with other plans or projects is likely to have a significant effect on any European Site. In this context, particular attention was paid to the European Site(s) at Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA.

The activity is not directly connected with or necessary to the management of any European Site and the Agency considered, for the reasons set out below, 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 any European

⁴ SAC: Special Area of Conservation designated under the *Habitats Directive*, Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

⁵ SPA: Special Protection Area designated under the *Birds Directive*, Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.

Site and accordingly determined that an Appropriate Assessment of the activity was required, and for this reason determined to require the applicant to submit a Natura Impact Statement.

This determination is based on the following:

- The poor water quality status assigned to the receiving water body, Argideen Estuary (IE_SW_090_0200) and the downstream, Courtmacsherry Bay (IE_SW_090_0000) under the Water Framework Directive.
- The poor quality of the effluent being discharged from the agglomeration.
- The direct discharge from the agglomeration into European Sites.

An Inspector's Appropriate Assessment has been completed and has determined, based on best scientific knowledge in the field and in accordance with the European Communities (Birds and Natural Habitats) Regulations 2011 as amended, pursuant to Article 6(3) of the Habitats Directive, that the activity, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site, in particular Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA, having regard to their conservation objectives and will not affect the preservation of these sites at favourable conservation status if carried out in accordance with this recommended licence and the conditions attached hereto for the following reasons:

- Schedule C: Specified Improvement Programme of the RL as drafted requires the appropriate improvements to ensure compliance with the emission limit values as set out in Schedule A: Discharges and Discharge Monitoring, of the RL by 31/12/2019.
- Schedule C: Specified Improvement Programme of the RL as drafted requires improvement works to ensure compliance with Condition 1.7 of the RL by 31/12/2019. Condition 1.7 states that the licensee shall maintain such available capacity within the waste water works as is necessary to ensure that there is no environmental risk posed to the receiving water environment as a result of the discharges.
- Schedule C: Specified Improvement Programme of the RL as drafted requires six secondary discharges to be decommissioned and discontinued by 31/12/2019.
- The RL specifies ELVs for waste water discharges which are set to ensure that emissions from this source will protect the quality of the receiving waters and to ensure compliance with the requirements of the European Communities Environmental Objectives (Surface Water) Regulations as amended. The ELVs specified will also contribute to the receiving waters achieving 'good' status as required under the Water Framework Directive.
- Condition 3.3 of the RL requires the licensee to take such measures as necessary to ensure that no deterioration in the quality of the receiving waters shall occur as a result of the discharge.
- Condition 5.1.7 of the RL requires the licensee to identify measures to minimise any environmental damage associated with discharges or overflows from the waste water works following anticipated events or accidents/incidents. Furthermore Condition 4.19 of the RL requires the licensee to provide an annual statement as to the measures taken or adopted to minimise environmental damage associated with discharges or overflows from the waste water works following anticipated events or accidents/incidents.

In light of the foregoing reasons no reasonable scientific doubt remains as to the absence of adverse effects on the integrity of those European Sites Courtmacsherry Estuary SAC and Courtmacsherry Bay SPA.

7. Cross Office Liaison

Advice and guidance issued by the Waste Water Technical Working Group (WWTWG) was followed in the assessment of this application. Advice and guidance issued by the WWTWG is prepared through a detailed cross-office co-operative process, with the concerns of all sides taken into account. The Board of the Agency has endorsed the advice and guidance issued by the WWTWG for use by licensing inspectors in the assessment of wastewater discharge licence applications.

The Courtmacsherry Timoleague agglomeration has been identified by the Catchments Science and Management Unit (CSMU) of the EPA as being a pressure on the Argideen Estuary. I have consulted with my colleagues in CSMU and indicated that the RL as drafted proposes the appropriate improvements to ensure compliance with the emission limit values as set out in *Schedule A: Discharges and Discharge Monitoring*, of the RL by 31/12/2019. This will help ensure that the receiving waterbody achieves good status and complies with all relevant legislation.

8. Submissions

Three submissions were received in relation to this application. The issues raised in the submissions are summarised below. However, the original submission should be referred to at all times for greater detail and expansion of particular points.

<u>Submission 1:</u> Michael McPartland, Environmental Officer, Inland Fisheries Ireland (IFI), Macroom, Co. Cork dated 4/10/2016.

Mr. McPartland outlines that IFI welcomes the proposed improvement of the waste water facilities to reduce the negative impact on the receiving waters.

IFI also note that there is a proposal to retain a storm water overflow which will retain the potential for polluting matter to enter the receiving water.

<u>Response:</u> All storm water overflows shall comply with the conditions set out in the licence. The RL as drafted states that all storm water overflows shall be in compliance with the criteria for storm water overflows, as set out in the DoECLG '*Procedures and Criteria in Relation to Storm Water Overflows*', 1995 and any other guidance as may be specified by the Agency.

Condition 5.2.4 of the RL states that a programme of improvements shall include an assessment of all storm water overflows associated with the waste water works to determine the effectiveness of their operation and in particular to identify improvements necessary to comply with the requirements of the licence.

<u>Submission 2:</u> Ms. Ger Faughnan, Principal Environmental Health Officer, HSE, Elmwood House, Lurriga, Skibbereen, Co. Cork dated 28/10/2016.

Ms Faughnan outlines a number of recommendations to be included in the licence for the Courtmacsherry Timoleague agglomeration. Some of these recommendations include that; a strict monitoring regime should be put in place and all discharges from the facility to water must be monitored and records maintained and available for inspection by the Agency; the licence should require a full performance system of the WWTP; all proposed mitigation measures to reduce potential odour emissions shall be fully adopted.

For full details of the submission refer to the original submission.

<u>Response</u>: Some of the recommendations proposed by Ms Faughnan, such as odour controls, pest control and a waste management plan are outside the control of this licence.

Schedule A: Discharges & Discharge Monitoring of the recommended licence (RL) specifies the Emission Limit Values (ELVs) to which the discharge from the agglomeration must conform. Monitoring of the discharges will take place as per this schedule of the RL.

Schedule B: Ambient Monitoring of the RL specifies the parameters, analysis method and frequency for which ambient monitoring of the primary discharge shall be carried out. The requirements for ambient monitoring in *Schedule B: Ambient Monitoring* are sufficient to monitor the status of the receiving water as a result of the discharge.

<u>Submission 3:</u> Mr. Simon Dolan, Development Applications Unit, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, Newtown Road, Wexford dated 7/11/2016.

Mr. Dolan outlines that Courtmacsherry Bay is designated a SAC (Site Code 1230) and an SPA (Site Code 4219). Mr Dolan highlights that any impact of the proposed discharge should be subject to the appropriate assessment process with reference to the conservation objectives for these designations.

<u>Response:</u> Following full assessment of the waste water discharge licence application and an inspectors appropriate assessment of the Courtmacsherry Timoleague agglomeration the Agency is satisified that the standards and conditions as set out in the RL provide the receiving water, Argideen Estuary, and the Courtmacsherry Estuary SAC, and the Courtmacsherry Bay SPA with the appropriate level of protection to ensure that the relevant environmental standards are maintained and achieved.

In the waste water discharge licence application, the Agency undertakes a detailed and comprehensive assessment of all relevant documentation. In particular, please refer to 'Section 6 - Birds Directive [2009/147/EC] & Habitats Directive [92/43/EEC]' and 'Appendix 2 - Assessment of the effect of discharges on European sites and proposed mitigate measures' of this Inspectors Report. These sections deal in detail with the content and conclusions of the appropriate assessment.

9. Charges

The RL requires that the licensee shall pay to the Agency such sum as the Agency from time to time determines is reflective of the monitoring and enforcement regime being proposed for the agglomeration.

10. Recommendation

I recommend that a Final Licence be issued subject to the conditions and for the reasons as set out in the attached Recommended Licence.

Signed

grome English

Yvonne English Environmental Licensing Programme



Appendix 1: Map showing location of Courtmacsherry Timoleague WWTP and associated primary discharge point.

Appendix 2: Assessment of the effect(s) of discharges on European site(s) and proposed mitigate measures.

European Site	Courtmacsherry Estuary SA	с
(site code):		
	(001230)	
Distance/ Direction from discharge(s)	The primary discharge discharges directly into Courtmacsherry Estuary SAC.	
Conservation objectives:	NPWS (2014) Conservation Objectives: Courtmacsherry Estuary SAC 001230. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht.	
Qualifying interests (* denotes a priority habitat)		Assessment
(* denotes a priority flabitat) Habitats: <u>Water Dependent</u> Estuaries Mudflats and sandflats not of tide Annual vegetation Salicornia and other annuals Atlantic salt meadows maritimae) Mediterranean salt meado Embryonic sh Shifting dunes along the salter arenaria (wh Fixed coastal dunes with he dunes)* Perennial vegetation of stony	overed by seawater at low of drift lines colonising mud and sand (Glauco-Puccinellietalia ws (Juncetalia maritimi) ifting dunes shoreline with Ammophila nite dunes) erbaceous vegetation (grey banks	 Emission to Water Discharge of effluent to water systems can lead to an altered nutrient balance (eutrophication), potential threat of toxicity, reduction in biological status and loss of habitat. Compliance with Environmental Quality Standards for surface water and groundwater will contribute to the maintenance of favourable conservation status. Conclusion: Schedule C: Specified Improvement Programme of the RL as drafted requires the appropriate improvements to ensure compliance with the emission limit values as set out in Schedule A: Discharge and Discharge Monitoring, of the RL by 31/12/2019. Schedule C: Specified Improvement Programme of the RL by 31/12/2019. Schedule C: Specified Improvement Programme of the RL by 31/12/2019. Condition 1.7 states that the licensee shall maintain such available capacity within the waste water works as is necessary to ensure that there is no environmental risk posed to the receiving water environment as a result of the discharges. Schedule C: Specified Improvement Programme of the RL as drafted requires six secondary discharges which are set to ensure that emissions from this source will protect the quality of the receiving waters and to ensure compliance with the requirements of the European Communities Environmental Objectives (Surface Water) Regulations as amended. The ELVs specified will also contribute to the receiving waters schieving 'good' status as required under the Water Framework Directive. Condition 3.3 of the RL requires shall occur as a result of the discharge. Potential for Accidents to Arise There is the potential for accidents and emergency situations arising at a waste water works resulting in partially treated or untreated waste waters discharging to the receiving waters. Such incidents or events could lead to the breach of ELVs and the discharge of elevated levels of polluting organic matter, which would have the potential to impact on the receiving water such massing at a wast
		Condition 5.1.7 of the RL requires the licensee to identify measures to minimise any environmental damage associated with discharges or overflows from the waste water works following anticipated events or

accidents/incidents. Condition 4.19 of the RL requires the licensee to provide an annual statement as to the measures taken or adopted to minimise environmental damage associated with discharges or overflows from the
waste water works following anticipated events or accidents/incidents.

European Site (site code):	Courtmacsherry Bay SPA (004042)	
Distance/ Direction from discharge(s)	The primary discharge discharges directly into Courtmacsherry Bay SPA.	
Conservation objectives:	NPWS (2014) Conservation Heritage and the Gaeltacht.	Objectives: Courtmacsherry Bay SPA 004219. Version 1. National Parks and Wildlife Service, Department of Arts,
Qualifying interests (* denotes a priority habitat)		Assessment
Species: <u>Water Dependent</u> Black-tailed Godwit (<i>Limosa</i> Dunlin (<i>Calidris alpina</i>) Lapwing (<i>Vanellus vanellus</i>) Black-headed Gull (<i>Chroicoco</i> Golden Plover (<i>Pluvialis apric</i> Common Gull (<i>Larus canus</i>) Red-breasted Merganser (<i>Ma</i> Bar-tailed Godwit (<i>Limosa la</i> Curlew (<i>Numenius arquata</i>) Wigeon (<i>Anas penelope</i>) Shelduck (<i>Tadorna tadorna</i>) Great Northern Diver (<i>Gavia</i> Habitats: <u>Water Dependent</u> Wetlands	limosa) ephalus ridibundus) caria) ergus serrator) pponica) immer)	 Emission to Water The water dependent species listed in the Qualifying Interests Column of this table mainly feed on water based species. Any impact on water quality could have a knock on effect on their populations as a result of loss of prey species. Conclusion: Schedule C: Specified Improvement Programme of the RL as drafted requires the appropriate improvements to ensure compliance with the emission limit values as set out in Schedule A: Discharges and Discharge Monitoring, of the RL by 31/12/2019. Schedule C: Specified Improvement Programme of the RL by 31/12/2019. Condition 1.7 of the RL by 31/12/2019. Condition 1.7 states that the licensee shall maintain such available capacity within the waste water works as is necessary to ensure that there is no environmental risk posed to the receiving water environment as a result of the discharges which are set to ensure that emissions from this source will protect the quality of the receiving waters and to ensure compliance with the requirements of the European Communities Environmental Objectives (Surface Water) Regulations as amended. The ELVs specified will also contribute to the receiving waters achieving 'good' status as required under the Water Framework Directive. Condition 3.3 of the RL requires the licensee to take such measures as necessary to ensure that no deterioration in the quality of the receiving waters shall occur as a result of the discharge. Potential for Accidents to Arise There is the potential for accidents and emergency situations arising at a wastewater treatment works resulting in partially treated or untreated waste waters discharge of elevated levels of polluting organic matter, which would have the potential to impact on the receiving water environment.