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17th May 2018

IW-ER-LT0438

Dear Breen,

RE: Courtmacsherry-Timoleague Waste Water Discharge Licence - Technical Amendment Application D0294-02

The Agency issued a Waste Water Discharge Licence for the Courtmacsherry-Timoleague Agglomeration (D0294-02) on the 12th April 2018. Upon review of the licence, Irish Water now requests a Technical Amendment under Section 33 (1) of the Waste Water Discharge (Authorisation) Regulations 2007, to amend *Schedule A.1 Primary Waste Water Discharge & Monitoring*. Irish Water is seeking to replace the Total Oxidised Nitrogen & Ammonia Emission Limit Value (ELV) parameters with a Dissolved Inorganic Nitrogen (DIN) ELV as per the following:

Parameter	Units	ELV	ELV Commencement Date	Proposed Amendment
Total Oxidised Nitrogen (as N)	mg/l	15	01/01/2020	Removal of ELV parameters from Schedule A.1
Ammonia – Total (as N)	mg/l	10		
Dissolved Inorganic Nitrogen (as N)	mg/l	50		Addition of ELV parameter to Schedule A.1

The Agglomeration of Courtmacsherry-Timoleague has a population equivalent of 1,460, based on 2016 census data. A new Waste Water Treatment Plant will be operational by the end of 2019 which will provide secondary treatment for a design population equivalent of 2,500. The receiving water, the Argideen Estuary (IE_SW_090_0200), is classified as a transitional water body and was assigned a 'Poor' WFD status in 2016. The downstream

coastal water body (Courtmacsherry Bay IE_SW_090_0000) was assigned a 'Poor' WFD status from 2010 – 2015.

The Inspectors Report (dated 23/02/2018) deemed that the proposed level of treatment by Irish Water at the new plant was acceptable *"It is considered that the level of treatment being proposed (secondary) for this agglomeration is appropriate."* Additionally the IR noted 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 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."*

As discussed in the Position Paper¹, the European Communities Environmental Objective (Surface Waters) Regulations 2009, as amended do not set out standards for ammonia or total oxidised nitrogen for coastal water bodies. With regards to transitional water bodies, the European Communities Environmental Objective (Surface Waters) Regulations 2009, as amended, set out standards for Biological Oxygen Demand and Molybdate Reactive Phosphorus. The Surface Water Regulations do not specify a total oxidised nitrogen or total ammonia standard for transitional waters.

Irish Water are of the opinion that there is no statutory requirement for imposing a total oxidised nitrogen and/or total ammonia ELV to the Courtmacsherry-Timoleague WWDL (D0294-02) and request that both parameters are removed from Schedule A.1 of the licence. In lieu of the removal of the above, an annual average Dissolved Inorganic Nitrogen (DIN) ELV of 50mg/l is proposed. Irish Water is of the opinion that an annual average of 50mg/l is the expected standard of DIN achieved by secondary level treatment plants and would not have any untoward impact on the receiving waterbody.

The closest EPA transitional sampling point to the primary discharge location is AR080 Courtmacsherry Beach (approximately 1km downstream). Monitoring results from 2016 have been included as Appendix No.1 to this technical amendment and are also summarised overleaf.

¹ Position Paper on Nutrient Emission Limit Values for Nitrogen in Coastal Waters – Irish Water 2017

Measured Parameter	Measured Average Value (2016)	Surface Water Regulations EQS (Transitional Waters)
BOD mg/l O2	0.83	≤4.0 mg/l (95%ile)
PO4 µg/l P	59 (Winter) 2.86 (Summer)	<u>Molybdate Reactive Phosphorus (MRP) (mg P/l)</u> <u>(0-17 psu) ≤0.060 (median)</u> <u>(35psu) ≤0.040 (median)</u>
Salinity PSU	32.78	n/a

In addition to the above, the measured average value in 2016 for Dissolved Inorganic Nitrogen was 0.174mg/l. This result is comparable to the surface water regulations for coastal water bodies where compliance with good status is achieved at ≤0.25 mg/N/l.

A Natura Impact Statement was submitted with the licence application in September 2016. The 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 above are implemented in full."*

The Mitigation Measures were 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.*

The provision of a new Waste Water Treatment Plant designed to provide secondary treatment for a design population equivalent of 2,500 will remove all untreated waste water discharges from the agglomeration by the end of 2019 and therefore prevent any significant environmental pollution to the receiving waters.

Irish Water has had regard to the EPA's publication *EPA Guidance for Irish Water on Requests for Alterations to a Waste Water Discharge Licence or Certificate of Authorisation* in compiling this submission for a Technical Amendment.

The proposed change will not result in a material change to the nature or volume of the discharge from the agglomeration.

Please find enclosed:

1. EPA 2016 Ambient Monitoring Courtmacsherry Beach (AR080)

Best Regards,



Niall Horgan
Wastewater Compliance Lead

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Appendix No. 1 EPA 2016 Ambient Monitoring Courtmacsherry Beach (AR080)

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Method	Sample Date	Sample Quid	Station #	Temp °C	pH	Acidity m	DO % Sat	Fe (µg/L)	Turbidity NTU	TOC (mg/L)	TP (µg/L)	Chlorophyll a (µg/L)	Se (µg/L)	PCB (µg/L)	PAHs (µg/L)	Lead (µg/L)	Cadmium (µg/L)	Copper (µg/L)	Mercury (µg/L)	As (µg/L)	Cr (µg/L)	Mn (µg/L)	Pb (µg/L)	Zn (µg/L)	Cd (µg/L)	Co (µg/L)	Ni (µg/L)	Mo (µg/L)	V (µg/L)	U (µg/L)	Other						
Argonne E-6000	11/02/2014	18-51	18-51	0.2	8	0.5	100.1	1.2	0.17	0.056	0.29	2.6	5.4	1800	1.51	0.00117	1.04	0.4	31.45	38.5	9.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7				
Argonne E-6000	11/02/2014	18-51	18-51	0.2	8	0.5	100.1	1.2	0.17	0.056	0.29	2.6	5.4	1800	1.51	0.00117	1.04	0.4	31.45	38.5	9.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7			
Argonne E-6000	11/02/2014	18-51	18-51	0.2	8	0.5	100.1	1.2	0.17	0.056	0.29	2.6	5.4	1800	1.51	0.00117	1.04	0.4	31.45	38.5	9.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7		
Argonne E-6000	11/02/2014	18-51	18-51	0.2	8	0.5	100.1	1.2	0.17	0.056	0.29	2.6	5.4	1800	1.51	0.00117	1.04	0.4	31.45	38.5	9.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	
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