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06th May 2014

IW-ER-Lt0019

**Re: Regulation 18 (3)(b) Castlemartyr Waste Water Discharge Licence Application (D0134-01)**

Dear Eimer Godsil,

In response to the Regulation 18(3)(b) request for further information notice dated the 04<sup>th</sup> of March 2014, please see below relevant information.

***Confirm the daily normal and daily maximum effluent volumes emitted from the primary discharge, expressed as m<sup>3</sup>/day***

Based on Hydraulic data for 2012 and 2013 the average/normal daily flow to the Castlemartyr WWTP is 322m<sup>3</sup>/day. The maximum daily flow over the period was 468m<sup>3</sup>.

***Clarify the design population equivalent (p.e.) of the WWTP and the current p.e. to the plant.***

The current design capacity of Castlemartyr WWTP as indicated in the license application is 2000 P.E with a design flow of 360m<sup>3</sup>/day. Based on the BOD loadings in the monthly operational reports the current P.E of the WWTP is 1200.

***Explain the nature of the overflow named SW02CYMR (196337E 72203N). Describe under what circumstances an overflow occurs or may occur. Confirm if the overflow is a storm water overflow or emergency overflow.***

The network in Castlemartyr is a partially combined system. The overflow named SW02CYMR is primarily an emergency overflow. A 'dial out facility' is in place to notify the plant operator of pump failures at the pump station should they occur.

However, SW02CYMR can also function as a stormwater overflow during very heavy rainfall events.

**Provide details of the new/proposed plant at Castlemartyr. Indicate commissioning or proposed commissioning date for the new plant. Provide details on treatment provided, any new discharge points and the design p.e. and the p.e served by the plant.**

The application details proposed plans for an extension to the Castlemartyr plant. However the existing waste water treatment plant has a plant design capacity of 2,000P.E which is considered sufficient to cater for wastewater loads up to 2020, based on population growth rate of 10% from 2014-2020 (1.6% per annum). The waste assimilative capacity at the estimated 2020 population equivalent (1,320 P.E) is detailed in the attached Table 1.

A 10% population growth rate from 2014-2020 is considered highly unlikely to occur over the next 6 years, therefore these proposals do not form part of the Draft Capital Investment Plan 2014-2016 and such works will not commence prior to 2018.

**Indicate if a new primary discharge location has been put into use since the application was submitted. If so, provide a map showing its location with grid references.**

There is no change to the primary discharge location.

**Clarify if an application for planning permission for the new/proposed WWTP has been submitted to An Bord Pleanála. If yes, was an Environmental Impact Statement (EIS) submitted as part of this planning application?**

**Where approval has been received from An Bord Pleanála, please submit a copy of the approval and a copy of any EIS submitted as part of the planning application. Where approval has not yet been received from An Bord Pleanála in respect of an application, what is the expected date for receipt of approval?**

No planning application has been made for a new/proposed WWTP. As it does not form part of the Draft Capital Investment Plan 2014-2016, a planning application will not be submitted prior to 2016.

Please note that all further correspondence in relation to this application should be addressed to Irish Water.

Kind Reagrds,



**Gerry Galvin**  
**Chief Technical Advisor**



**Table 1: Waste Assimilative Capacity**

Waste Assimilative Capacity (WAC) Calculation				Calculation Sheet			
			Date <b>02/05/2014</b>				
<b>WWTP</b>	Castlemartyr						
<b>Name of River</b>	River Kiltha						
		m <sup>3</sup> /s	Data Source	m <sup>3</sup> /d			
Dry Weather Flow		0.009	WWDLA	734			
95% Flow		0.033	WWDLA	2,851			
Mean Annual Flow		0.224	WWDLA	19,354			
<b>Effluent Standards</b>		mg/l					
Carbonaceous BOD		25.0					
Ammonia Nitrogen (NH)		5.0					
Ortho Phosphate (OP)		2.0					
Average Background Concentration (Notional)			Average Background Concentration (Actual)				
	mg/l	Data Source	mg/l	Data Source			
Carbonaceous BOD	0.260	Notionally clean	1.558	Measured average (WWDLA)			
Ammonia Nitrogen (NH)	0.008	Notionally clean	0.050	Measured < 0.1mg/l (WWDLA)			
Ortho Phosphate (OP)	0.005	Notionally clean	0.031	Measured < 0.02mg/l (WWDLA)			
Allowable Downstream Concentration (Surface Water Regulations)							
	95%ile mg/l	Mean mg/l	Data Ref				
	2.60	1.50	New regs - good status				
	0.14	0.065	New regs - good status				
	0.075	0.035	New regs - good status				
PE	WWTP Daily Flow	Flow in River	Allowable effluent conc			Comments	
		95 Percentile	BOD	NH	OP		
	m <sup>3</sup> /d	m <sup>3</sup> /d	mg/l	mg/l	mg/l		
1,200	270	2,851	<b>27.31</b>	<b>1.53</b>	<b>0.81</b>	Current PE	
1,320	297	2,851	<b>25.06</b>	<b>1.41</b>	<b>0.75</b>	2020 PE	
2,000	450	2,851	<b>17.43</b>	<b>0.98</b>	<b>0.52</b>	Design PE	
PE	WWTP Daily Flow	Flow in River	WAC				
		95 Percentile	BOD	NH	OP		
	m <sup>3</sup> /d	m <sup>3</sup> /d	kg/d	kg/d	kg/d		
1,200	270	2,851	7.37	0.41	0.22	Current PE	
1,320	297	2,851	7.44	0.42	0.22	2020 PE	
2,000	450	2,851	7.84	0.44	0.23	Design PE	
PE	WWTP Daily Flow	Resultant Concentration (Notionally Clean)			Resultant Concentration (Actual)		
		BOD	NH	OP	BOD	NH	OP
	m <sup>3</sup> /d	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
1,200	270	2.42	0.441	0.178	3.72	0.483	0.204
1,320	297	2.62	0.480	0.194	3.92	0.522	0.220
2,000	450	3.67	0.690	0.278	4.97	0.732	0.304