Comhairle Contae Chorcaí
Cork County Council

Waste Water Operations,
Hume House,
Wolf Tone Street,
Clonakilty,
Co. Cork.
Tel: (021) 4276891 ext. 7048
Fax No: (023) 8858814

Web: http://www.corkcoco.ie/

Environmental Licensing Program,
Office of Climate, Licensing &Resource
Environmental Protection Agency,
PO box 3000
Johnstown Castle Estate
Co. Wexford.

25/4/13

Licensing Action - Reg 18(3)(b) Notice Sent - Dunmanway Licence (D0160-01)

Licence: Dunmanway (D0160-01)

Status Reason: Open

Issued On: 11/04/2013 **Due Date:** 26/04/2013

Action Type: Licensing Action

Status History Action: Reg 18(3)(b) Notice Sent

Dear Sirs,

I refer to your request for additional information relating to an application for a waste water discharge licence relating to agglomeration named Dunmanway.

In accordance with Regulation 18(3)(b) of the regulations please find the information as requested as below,

REGULATION 16 COMPLIANCE:

Non Technical Summary

In 2010 Cork county Council applied for a Waste Water Discharge licence for the agglomeration of Dunmanway.
At the time of application the Waste water treatment plant consisted of 2 No. Imhoff tanks for primary treatment. 2 No. Percolation filters for secondary treatment and final humus tanks prior to discharge to the river Bandon via an outfall sewer. This existing plant was designed for a PE of 1000 and was severely overloaded.

In 2011 construction of a new waste water treatment plant ,with a design capacity of 3,500 commenced on the site of the existing WWTP. The treatment provided at the new WWTP includes primary screening of the incoming sewerage at the inlet, Dosing of the influent to achieve Phosphorus removal, Treatment of the sewerage in Sequence batch reactor's (SBR's) Decanting of the treated liquid stream to a tributary

of the Bandon river via a new discharge pipeline, Sludge removal and thickening on site for off site disposal/recycling. The new discharge from the WWTP (SW02DWAY) is approximately 25m to the south west of the existing discharge.
The existing Pump stations at Long bridge and quarry road were also upgraded as part of this contract and new emergency overflows installed at the same location of the existing emergency overflow.

In July 2012 the existing WWTP including outfall was decommissioned and removed and the new WWTP has been operational including pump stations since this date.

Attachment C2 drawing that was submitted with the original Application showing location of Discharge points (drawing No Dunmanway_C2_21) has been revised and replaced with drawing WWDL-DU-01. The discharge locations that have been decommissioned/replaced are removed on this new revised drawing.
Table D1(i)(a) has been revised with the new Co-ordinates of the discharge location and revised flows included based on information received from flows of the outlet of the new WWTP to date.
Table D1(iii)(a) is revised detailing the storm overflows from the pump stations at Long Bridge and Quarry road, including 3 existing combined sewer overflows.

RESPOINSE TO QUERIES

Question: Confirm that the new WWTP has been constructed in Dunmanway. Confirm the date that the WWTP was commissioned into operation.

Response: **The new WWTP was constructed in Dunmanway during 2011/2012. This plant was commissioned and put into operation on 24th July 2012**

Question: Provide details on the type of treatment provided in the new WWTP, to include the standards to which it treats the effluent, in particular the standards for BOD, COD, suspended solids, orthophosphate and ammonia.

Response: **The treatment provided at the WWTP includes primary screening of the incoming sewerage at the inlet, Dosing of the influent to achieve Phosphorus removal, Treatment of the sewerage in Sequence batch reactor's (SBR's) Decanting of the treated liquid stream to a tributary of the Bandon river, Sludge removal and thickening on site for off site disposal/recycling.**
The standards to be achieved on the treated effluent are as follows.
BOD – 25mgO2/l
Suspended Solids -35mg/litre
COD - 125 mgO2/litre
Total Phosphorus – 1.5mg/litre

Question: Clarify if the primary discharge point has been relocated as part of the improvement works. If yes, revise Table D.1(i)(a) 'Emissions to Surface/Ground Waters) Primary Discharge' of the application form.

Response: **The primary discharge point has been relocated as part of the improvement works. This is shown on attached drawing (**WWDL-DU-01) **as SW02DWAY**

Question: Confirm the current population equivalent load to the WWTP and the design population equivalent of the new WWTP.

Response: **The current PE load to the plant based on population is estimated at 2214.**
The current design PE of the Plant is 3500.

Question: Confirm if the new pumping stations have been constructed as part of the upgrade works. If yes, are there emergency overflows from the pumping stations?

Response: **New Pump stations have been constructed at Quarry road and at Long bridge. There are emergency overflows from these Pump stations at locations as shown on layout drawing** (WWDL-DU-01) **as SW06DWAY and SW04DWAY respectfully.**

Question: Confirm the number and locations of stormwater overflows within the agglomeration. Complete Table D.1.(iii)(a) of the application form accordingly.

Response: **There are 3 combined sewer stormwater overflows within the agglomeration. SW07DWAY, SW08DWAY, SW09DWAY as shown on layout drawing (WWDL-DU-01**).

Associated Documents: **Ref: Appendix A: - Table D1- Emissions to Surface water attached**

Question: Provide an up to date drawing showing the agglomeration boundary, WWTP location, pumping station locations, discharge points, stormwater overflows and upstream and downstream ambient monitoring points.

Associated Documents: **Ref: Appendix B: - Drawing WWDL-DU-01attached**

Question: Provide the most recent effluent monitoring results for BOD, COD, suspended solids, orthophosphate and ammonia from the primary discharge in the new WWTP

Response: **Motoring to date is in accordance with UWW regs which in the case of Dunmanway are for BOD/COD/SS**

Associated Documents: **Ref: Appendix C: - Monitoring results for primary discharge attached.**

Question: Provide the most recent ambient monitoring results upstream and downstream of the primary discharge from the new WWTP.

Associated Documents: Ref: Appendix D: - Ambient Monitoring results.

Question: Provide a revised non-technical summary which reflects the information you supply in compliance with this notice.

Response: **A non technical summary his provided as in introduction to this response**

Question: Provide the grid reference (easting and northing) of the monitoring point for the primary discharge from the WWTP

Response: **The Grid reference is shown on drawing (WWDL-DU-01) of the primary discharge point of the WWTP as SW02DWAY and included in revised Table D1(i)(a). E:124122, N:053001**

We trust that this information as submitted satisfies the request of the Regulation 16 compliance requirements, and if there are any other "informal" queries in this regard please contact the undersigned.

Yours sincerely

John Conroy
Senior Executive Engineer
Email: john.conroy@corkcoco.ie

APPENDIX A

Table D1 – Emissions to Surface water

Table D1(i)(a); Emissions to Surface water (Primary Discharge Point)

Discharge point Code: SW02DWAY – Dunmanway WWTP

Source of Emission:	Dunmanway WWTP Primary Discharge
Location:	Milleenannig, Dunmanway
Grid Reference. (12 digit, 6E, 6N):	124122E, 052532N
Name of receiving waters:	River Bandon
River Basin District:	South Western River Basin District
Designation of receiving waters:	SAC
Flow rate in receiving waters:	0.07 m^3 per sec dry weather flow 0.14 m^3 per sec 95%ile flow

Emission Details:

(i) Volume emitted			
Normal flow /day	1,100 m^3	**Maximum/day**	2,500 m^3
Maximum flow rate/hour	140 m^3	**Period of emission (avg)**	60min/hr 24hr/day 365 day/yr
Dry weather flows/day	250 m^3		

Table D1(iii)(a); Emissions to Surface water (Emergency Stormwater Overflow)

Discharge point Code: SW04DWAY – Long Bridge Pump station Dunmanway

Source of Emission:	Long Bridge, Emergency Overflow
Location:	Dunmanway North Dunmanway
Grid Reference. (12 digit, 6E, 6N):	124081E, 053008N
Name of receiving waters:	River Bandon
River Basin District:	South Western River Basin District
Designation of receiving waters:	SAC
Flow rate in receiving waters:	0.07 m^3 per sec dry weather flow 0.14 m^3 per sec 95%ile flow

Emission Details:

(i) Volume emitted			
Normal flow /day	unknown	**Maximum /day**	unknown
Maximum flow rate/hour	unknown	**Period of emission (avg)**	unknown
Dry weather flows/day	0		

Table D1(iii)(a); Emissions to Surface water (Emergency Stormwater Overflow)

Discharge point Code: SW06DWAY – Quarry road, Pump station Dunmanway

Source of Emission:	Quarry road, Emergency Overflow
Location:	Brookpark, Dunmanway
Grid Reference. (12 digit, 6E, 6N):	123566E, 052546N
Name of receiving waters:	Dirty River
River Basin District:	South Western River Basin District
Designation of receiving waters:	None
Flow rate in receiving waters:	Unknown

Emission Details:

(i) Volume emitted			
Normal flow /day	unknown	**Maximum/day**	unknown
Maximum flow rate/hour	unknown	**Period of emission (avg)**	unknown
Dry weather flows/day	0		

Table D1(iii)(a); Emissions to Surface water (Stormwater Overflow)

Discharge point Code: SW07DWAY – Combined Sewer Overflow

Source of Emission:	Combined Sewer emergency overflow
Location:	Brookpark Dunmanway
Grid Reference. (12 digit, 6E, 6N):	123235E, 052182N
Name of receiving waters:	Brewery River
River Basin District:	South Western River Basin District
Designation of receiving waters:	None
Flow rate in receiving waters:	Unknown

Emission Details:

(i) Volume emitted			
Normal flow /day	unknown	**Maximum/day**	unknown
Maximum flow rate/hour	unknown	**Period of emission (avg)**	unknown
Dry weather flows/day	0		

Table D1(iii)(a); Emissions to Surface water (Stormwater Overflow)

Discharge point Code: SW08DWAY – Combined Sewer Overflow

Source of Emission:	Combined Sewer emergency overflow
Location:	Castle street, Dunmanway
Grid Reference. (12 digit, 6E, 6N):	122787E, 052453N
Name of receiving waters:	Sally River
River Basin District:	South Western River Basin District
Designation of receiving waters:	None
Flow rate in receiving waters:	Unknown

Emission Details:

(i) Volume emitted			
Normal flow /day	unknown	**Maximum/day**	unknown
Maximum flow rate/hour	unknown	**Period of emission (avg)**	unknown
Dry weather flows/day	0		

Table D1(iii)(a); Emissions to Surface water (Stormwater Overflow)

Discharge point Code: SW09DWAY – Combined Sewer Overflow

Source of Emission:	Combined Sewer emergency overflow
Location:	Chapel street
Grid Reference. (12 digit, 6E, 6N):	123730E, 053010N
Name of receiving waters:	Dunmanway Lake
River Basin District:	South Western River Basin District
Designation of receiving waters:	None
Flow rate in receiving waters:	Unknown

Emission Details:

(i) Volume emitted			
Normal flow /day	unknown	**Maximum/day**	unknown
Maximum flow rate/hour	unknown	**Period of emission (avg)**	unknown
Dry weather flows/day	0		

APPENDIX B

Agglomeration Drawing

WWDL-DU-01

N

SW09
COMBINED SEWER
OVERFLOW POINT
E: 123730
N: 053010

LONG BRIDGE
PUMP STATION

SW04 DWAY
SECONDARY DISCHARGE POINT
EMERGENCY OVERFLOW
LONG BRIDGE PUMPING STATION
E: 124081
N: 053008

SW08 DWAY
COMBINED SEWER
OVERFLOW POINT
E: 122787
N: 052453

QUARRY ROAD
PUMP STATION

DUNMANWAY
WWTP

aSW01u DWAY
AMBIENT MONITORING
LOCATION
LONG BRIDGE
E: 124181
N: 53001

SW06 DWAY
SECONDARY DISCHARGE POINT
EMGERGENCY OVERFLOW
QUARRY ROAD PUMP STATION
E: 123566
N: 052546

SW02 DWAY
DUNMANWAY WWTP
PRIMARY EFFLUENT
DISCHARGE POINT
E: 124122
N: 052532

SW07 DWAY
COMBINED SEWER
OVERFLOW POINT
E: 123235
N: 052182

aSW01d DWAY
AMBIENT MONITORING
LOCATION
BALLYBOY BRIDGE
E: 125690
N: 051288

DEMESNE
BALLYHALWICK
UNDERHILL
MILLEENANANNIG
NEDINAGH WEST
MAUGH
MOHONA

NOTES

1 All dimensions in metres unless otherwise stated.

2 Dimensions not to be scaled from drawing. Any queries to be conveyed to the Water Services Dept., Floor 11, County Hall, Cork.

GENERAL LEGEND

Agglomoration Boundary

Rev	By	Date	Description
A0	AOB	April 2013	For Submission to EPA

0m 10mm 20mm 29mm 39mm 49mm

CORK COUNTY COUNCIL

Water Services,
Floor 11,
County Hall,
Cork.

Project:

Dunmanway WWTP Discharge Licence

Title:

Dunmanway Town

Drawn	Checked	Designed	Traced	Date	Scale	Drawing Size
JC	AOB	JC	JC	25.04.2013	1: NTS	A3

Date: 25 April 2013

Status: *Information*

Drawing No. WWDL-DU-01

Rev. B0

APPENDIX C

Monitoring Results for Primary Discharge

Dunmanway WWTP Outlet

Sample	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent	Effluent
Sample Code	GW1015	GW1054	GW1103	GW1174	GW1214	Gx057	GX164	GX242	GX323
Sample Date	24/10/2012	06/11/2012	14/11/2012	20/11/2012	29/11/2012	31/01/2013	26/02/2013	13/03/2013	09/04/2013
Sample Type	Grab	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Flow M^3/Day	*					*	*	607	*
BOD mg/L	2.7	3.5	1.1	4.2	6.4	4.1	5.1	1.9	9
COD mg/L	10.5	23	10.5	10.5	34	10.5	35	10.5	38
Suspended Solids mg/L	6	3	4	4	5	3	7	3	12

0 0 0

APPENDIX D

Ambient Monitoring Results

				Parameter	Hardness	Molybdate Reactive Phosphorous	Alkalinity	Chloride	Ammonium	Conductivity @ 20 oC	Dissolved Oxygen % Saturation	Dissolved Oxygen	Nitrate	Nitrite	pH	BOD	Temperature	Total Nitrogen
					CaCO3	P	CaCO3	Cl	NH4			O2	NO3	NO2		O2		N
				Max.	--	0.03	--	--	0.5	--	150	15	25	0.05	9	5	--	--
				Target	--	--	--	--	--	--	--	--	--	--	--	--	--	--
				Min.	--	--	--	--	--	--	50	5	--	--	6	--	--	--
Station	Station Reference	Sample Reference	Sample Date	Analyst Conclusion	mg/l	mg/l	mg/l	mg/l	mg/l	µS/cm	% O2	mg/l	mg/l	mg/l	pH units	mg/l	Degrees C	mg/l
Long Br.	RS20B020200	2008/1145	04-Jun-08	-		< 0.006			< 0.026					0.017				
Long Br.	RS20B020200	2008/2110	03-Sep-08	-		0.009			0.031		101	10.1		< 0.013			14.3	
Long Br.	RS20B020200	2008/2514	01-Oct-08	-		< 0.006			0.039		100	10.4		< 0.013			13.6	
Long Br.	RS20B020200	2008/2939	05-Nov-08	-		0.007			< 0.026		102	11.8		< 0.013			9.2	
Long Br.	RS20B020200	2008/3379	10-Dec-08	-		0.009					102	12.5		0.015			6.8	
Long Br.	RS20B020200	2009/0046	08-Jan-09	-		< 0.006	32		0.029		95	12.9	5.29	< 0.013			3	
Long Br.	RS20B020200	2009/0466	11-Feb-09	-		0.007			0.008	117	99	12.4	5.86	< 0.013	7.5		5.8	
Long Br.	RS20B020200	2009/0699	04-Mar-09	-		0.017			0.035		102	12.3		0.015			5.9	
Long Br.	RS20B020200	2010/0640	03-Mar-10	-	35	0.018	34		0.046	112	101	12.1	3.4		7.4	0.7	6.9	
Long Br.	RS20B020200	2010/0987	14-Apr-10	-	35	0.008	60		< 0.006	109	105	12.1	9.1	< 0.013	7.4	0.4	9.6	
Long Br.	RS20B020200	2010/1315	12-May-10	-	42	< 0.006	50		< 0.006	121	93	10.1	2.03	< 0.013	7.4	0.8	12.2	
Long Br.	RS20B020200	2010/2329	12-Aug-10	-		< 0.006			0.008	123	109	10.7	3		7.6	0.4	16.3	
Long Br.	RS20B020200	2010/3241	21-Oct-10	-		< 0.006			0.006	105	107	12.3	2.18	< 0.013	7.4	0.4	9.4	
Long Br.	RS20B020200	2011/0614	02-Mar-11	-		0.012				106	93	11.5		0.014	7	0.3	6.9	
Long Br.	RS20B020200	2011/2461	04-Aug-11	-		0.01		15	0.05	117	93	9	3.4	0.014	7.3	1.2	16.2	
Long Br.	RS20B020200	2011/3068	08-Sep-11	-		0.012			< 0.006	89	92.9	9.6	2.29	< 0.013	7.3	0.1	13.4	1
Long Br.	RS20B020200	2011/3758	19-Oct-11	-		0.03			< 0.006	98	84	9.2	3.39	< 0.013	7.3	1.7	11	1.2
Long Br.	RS20B020200	2012/0403	08-Feb-12	-		0.01		14.7	0.129	108	99	11.7	5.6	0.019	7.3	0.6	8.4	2.1
Long Br.	RS20B020200	2012/0738	07-Mar-12	-				12.6	< 0.006	81	100	11.6	3	0.014	7.2	0.6	8.8	1.3
Long Br.	RS20B020200	2012/1064	04-Apr-12	-		< 0.006			0.012	119	104	12.3	4.42	< 0.013	7.8	1	8.1	
Long Br.	RS20B020200	2012/2746	30-Aug-12	-		0.009			0.018	81	100.6	10.4	2.29	0.016	7.3	1.1	13.8	
Long Br.	RS20B020200	2012/3403	04-Oct-12	-		0.007		12.7	0.028	89	88	9.8	2	< 0.013	7.4	1.1	10.6	

Parameter	Hardness	Molybdate Reactive Phosphorous	Alkalinity	Chloride	Colour	Ammonium	Conductivity @ 20 oC	Dissolved Oxygen % Saturation	Dissolved Oxygen	Nitrate	Nitrite	pH	BOD	Temperature	Fluoride	Total Nitrogen
	CaCO3	P	CaCO3	Cl	Hz	NH4			O2	NO3	NO2		O2		F	N
Max.	--	0.03	--	--	--	0.5	--	150	15	25	0.05	9	3	--	--	--
Target	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Min.	--	--	--	--	--	--	--	50	5	--	--	--	--	--	--	--
Sample Reference	Sample Date	Analyst Conclusion	mg/l	mg/l	mg/l	mg/l	Hazen	mg/l	µS/cm	% O2	mg/l	mg/l	mg/l	pH units	mg/l	Degrees C	mg/l	mg/l
2009/0700	04-Mar-09	-	28	0.024	22	14.5	76	0.043	95	101	12.2	5.1	0.022	7.1	1.8	5.8		
2009/1402	06-May-09	-	50	0.006	32	14.5	20	0.018	122	91	9.8	4.8	0.017	7.4	0.5	12.2		
2009/1799	04-Jun-09	-	40	0.012	44	15.4	36	0.066	127	89	8.9	5.3	0.038	7.1	2.1	15.2		
2009/2127	01-Jul-09	-	31	0.008	34		63	0.045	103	87	8.5	3.6	0.026	6.9	1.1	16.7		
2009/2529	06-Aug-09	-	38	0.012	36	11.9	43	0.008	110	98	10	3.6	0.014	7.2	0.8	14.3	< 0.1	
2009/2936	02-Sep-09	-	26	0.02	41	10.7	65	0.035	95	94	9.5	3.1	***0.113***	7	0.9	13.6	< 0.1	
2009/3355	07-Oct-09	-	37	0.013	26	9.6	97	0.022	76	85	9.3	< 1.8	0.022	6.6	1.8	11.1	< 0.1	
2009/3759	11-Nov-09	-	45	0.014	30	13.4	30	0.044	108	73	8.3	4.5		7.1	< 1	9.3	< 0.1	
2010/0307	03-Feb-10	-	41	0.016	52		30	0.164	125	98	11.4		0.025	6.9	0.5	8		
2010/0638	03-Mar-10	-	38	0.023	34	13	21	0.092	122	100	11.8	5.1		7.2	0.8	7.8		
2010/1316	12-May-10	-	44	0.006	52	15.1	10	< 0.006	124	102	11.2	4.6	0.033	7.1	1	11.6		
2010/2330	12-Aug-10	-	19	< 0.006	40	16.6	15	< 0.006	128	120	12	4.7		7.3	0.8	15.7		
2010/3242	21-Oct-10	-	47	0.011	34		14	0.093	118	106	12.2	3.5	0.03	7.2	0.3	9.4		
2011/0224	02-Feb-11	-	38	0.021	28	13.8	20	0.071	113	103	11.5	7.4	0.021	6.9	0.7	8.2		
2011/0613	02-Mar-11	-	58	0.01	38	13.7	13		116	92	11.5	7.1	0.014	6.8	0.5	6.9		
2011/1390	04-May-11	-	46	0.008	54	12.5	32	0.05	99	107	11.6	4.8	0.029	7	1.3	11.9		
2011/2459	04-Aug-11	-	36	0.019	48	16.7	22	0.074	128	84	8.2	6.3	***0.076***	7	1.5	15.8		
2011/3066	08-Sep-11	-	31	0.007	44		35	0.021	100	86.2	8.9	3.8	0.018	6.9	0.6	13.6		
2011/3756	19-Oct-11	-	27	0.03	28		23	0.019	109	85	9.3	5.24	0.017	7.1	1.8	11.5		1.4
2012/0404	08-Feb-12	-	37	0.01	32	14.9	20	0.032	119	94	11.1	6	0.023	7	1.3	8.6		2.4
2012/0739	07-Mar-12	-	45		34	13.3	38	0.01	101	98	11.3	3.4	0.02	7.1	0.8	9.1		1.5
2012/1065	04-Apr-12	-	51	0.008	46		17	0.015	133	100	11.6	6.3	0.038	7.4	1	8.3		
2012/2744	30-Aug-12	-	39	0.014	50		75	0.02	91	95.9	9.9	3	0.017	7.1	0.8	14.2		
2012/3401	04-Oct-12	-		0.01	34	13.8		0.022	98	87	9.5	3.1	< 0.013	7.2	0.5	11.2		
2012/4269	06-Dec-12	-	44	0.011	19	12.5	26	0.029	114	83	10.6	5.6	< 0.013	7.1	0.4	4.9		