

**PASSAGE WEST / MONKSTOWN AGGLOMERATION
ANNUAL ENVIRONMENTAL REPORT**

1st January 2011 – 31st DECEMBER 2011

CORK COUNTY COUNCIL – ZONE 2

ORIGINAL

Environmental Protection Agency

P.O. Box. 3000, Johnstown Castle Estate, County Wexford
Telephone : 053- 60600 Fax : 053 – 60699

Licence
Reg. No.

D0129-01

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Revision Control Table

Rev:	Description of Changes:	Prepared by:	Date:
A	Issue to EPA	JS	26/02/2012

1.0 Introduction

Cork County Council holds a Waste Water Discharge Licence (Register No. D0129-01) in respect of the agglomeration named Passage West/Monkstown. This licence was granted on 20th July 2010. The aim of this Annual Environmental Report (AER) is to provide a review of activities relevant to the discharge from 1st January 2011 to 31st December 2011.

The required scope of the report is outlined in Schedule D (Annual Environmental Report Content) of the Waste Water Discharge Licence.

2.0 Summary of Monitoring Reports

2.1 Discharges from Agglomeration

Condition 4.1 states that *"The licensee shall carry out such sampling, analyses, measurement, examinations, maintenance and calibrations as set out below and in accordance with Schedule B: Monitoring of this licence"*.

2.1.1 Monitoring of Primary Discharge

Schedule B, Section B.1 states that *"No Primary Waste Water Discharge monitoring is required in this licence"*.

2.1.2 Monitoring of Secondary Discharge

Schedule B, Section B.2 states that *"No Secondary Waste Water Discharge monitoring is required in this licence"*.

Interpretation of the discharge monitoring results is therefore not required.

2.1.3 Ambient Monitoring

Condition 4.8 states that *"The licensee shall report annually in the AER on the chemical and ecological status of the receiving water, etc"*. Refer to Attachment 1.

Condition 4.7 states that *"The license shall within twelve months of the date of grant of this licence, investigate the sources of metals detected during monitoring of discharges from the wastewater works and take such measures as are necessary to reduce these substances in the discharge. A report on the investigation and measures identified, including timeframe for implementation, shall be included in the AER"*. Refer to Section 5.0.

3.0 Urban Waste Water Treatment Directive

No data was collected under the UWWT Directive.

4.0 Complaints & Incident Reports

4.1 Complaints Summary

Condition 6.5 states that *"The licensee shall record all complaints of an environmental nature related to the discharge(s) to waters from the waste water works in accordance with the national environmental complaints procedure. Each such record shall give details of the date and time of the complaint, the name of the complainant (if provided), and the nature of the complaint. A record shall also be kept of the response made in the case of each complaint"*. No complaints were received in 2011 relating to discharge(s) to water from the waste water works.

4.2 Reported Incidents Summary

Condition 6.1 states that *"The licensee, shall notify the Agency by both telephone and facsimile, to the Agency's headquarters in Wexford, or to such other Agency office as may be specified by the Agency, as soon as is practicable after the occurrence of any incident (as defined in this licence). The licensee shall include as part of the notification, date and time of the incident, summary details of the occurrence, and where available, the steps taken to minimise any discharges"*.

Condition 6.4 states that *"The licensee shall make a record of any incident. This record shall include details of the nature, extent, and impact of, and circumstances giving rise to the incident. The record shall include all corrective actions taken to manage the incident, to minimise the effect on the environment, and to avoid recurrence. The licensee shall as soon as practicable following incident notification, submit to the Agency the incident record including clean up and recurrence prevention measures"*.

No reportable incidents occurred in 2011 relating to the discharge(s) to water from waste water works.

5.0 Cork Lower Harbour Sewerage Scheme

The Passage West/Monkstown agglomeration is made up of the towns and villages of Passage West, Glenbrook and Monkstown. These adjacent coastal population centres stretch for approximately 4km along the western side of Cork Harbour and are mainly residential with little significant industrial development.

At present sewage produced in the towns and villages in the Lower Harbour area discharged untreated into Cork Harbour at a number of locations.

There are plans in place to provide a wastewater treatment plant (WWTP) for the Lower Harbour area as part of the proposed Cork Lower Harbour Sewerage Scheme.

An Bord Pleanála granted approval for the proposed Cork Lower Harbour Sewerage Scheme during June 2009 and the Preliminary Report "Cork Harbour Main Drainage Scheme Preliminary Report March 2008" was submitted to the Department of Environment, Heritage and Local Government (DOEHLG) for approval.

Cork County Council issued an addendum report to the Preliminary Report to the DOEHLG in January 2011, and is currently awaiting a decision. The Council has advertised to pre-qualify Consultants for the Design, Tender, Construction and Handover Stages in February 2011. The Council submitted a brief to Consultants in February 2012.

The requirement for the addendum report has had a knock on effect on the project programme that was submitted as part of the response to Condition 5.1. A revised project programme is attached in Attachment 2. The timeframe for completion is now December 2016. This is subject to available finance both locally and from the DOEHLG.

For further information see copy of the letter to the EPA dated 7th of December 2010 in Attachment 3.

6.0 Environmental Liability & Financial Provisions

6.1 Annual statement on Prevention of Environmental Damage

Condition 7.2.1 states that *"The licensee shall a part of the AER provide an annual statement as to the measures taken or adopted in relation to the prevention of environmental damage and the financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure) or accidents/incidents, as may be associated with discharges or overflows from the waste water works"*.

The Council is in the process of assembling and collating data on all of its relevant sites in order that it can present its proposal to Irish Public Bodies Mutual Insurances Ltd. The Council at this stage has no indication of the cost of this type of cover for all of the relevant facilities in the county and is not in a position to indicate when it expects to have the matter resolved.

6.2 ELRA

Condition 7.2.2 states that *"The licensee shall arrange for the completion, by an independent appropriately qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA) to address the liabilities from present or planned discharges. A report on this assessment shall be submitted to the Agency for agreement as part of the second AER (required under Condition 6.11). The ELRA shall be reviewed as necessary to reflect any significant change to the volume or character of the effluent discharged, and in any case, every 3 years following initial agreement (the results of the review shall be notified as part of the AER)"*.

The ELRA has not been prepared. Refer to Section 6.1.

6.3 Financial Provisions

Condition 7.2.3 states that *"As part of the measures identified in Condition 7.2.1, the licensee shall, to the satisfaction of the Agency, make financial provision to cover any liabilities identified in Condition 7.2.2. The amount of indemnity held shall be reviewed and revised as necessary, but at least triennially. Proof of renewal or revision of such financial indemnity shall be included in the annual 'Statement of Measures' report identified in Condition 7.2.1"*.

Financial provision has not been made. Refer to Section 6.1.

Attachment 1

**Annual Reports on the Chemical
and Ecological Status of the
Receiving Waters**

Copy of Marine Insitute Monitoring Data -Cork Harbour Shellfish Water Monitoring Programme compliance with SI 268 of 2006												
Year	Sample	Date	Time	Station	Probe_Temp	Probe_pH	Probe_Salinity	Probe_DO_mgL	Probe_DO_%Sat	Suspended Solids_mgL	True_Colour	
09	1027	091201	1800	Cork Harbour - Rostellian North	8.03	7.11	25.3	9.23	92	58.7	<4	
09	1080	091229	1125	Cork Harbour - Rostellian South	6.60		30.7	9.80	98	36.3	<4	
09	1081	091215	1330	Cork Harbour - Rostellian North	5.60		25.0	10.30	100	344	<4	
10	1116	100221	1556	Cork Harbour - Rostellian South	7.20		30.0	10.50	105	4.00	<4	
10	1117	100221	1627	Cork Harbour - Rostellian North	6.30		28.0	11.00	110	9.00	<4	
10	1317	100514	1345	Cork Harbour - Rostellian South	15.40	8.30	31.0	12.70	153	16	<4	
10	1318	100514	1411	Cork Harbour - Rostellian North	16.00	8.40	32.0	12.70	155	17	4.7	
10	1516	100824	1341	Cork Harbour - Rostellian South	19.10	8.50	32.0	11.10	146	5	17	
10	1517	100824	1421	Cork Harbour - Rostellian North	18.30	8.10	33.0	7.80	101	10	4.2	
10	1518	100831	1236	Cork Harbour - Rostellian South	15.80	8.20	34.0	9.10	112	18	6	
09	1026	091201	1720	Cork Harbour - North Channel	7.57	8.16	23.8	9.58	94	35.9	<4.1	
10	1118	100221	1728	Cork Harbour - North Channel	6.20		28.0	10.10	100	20.0	5.6	
10	1319	100514	1458	Cork Harbour - North Channel	13.20	8.20	32.0	9.50	110	16	5.4	
10	1519	100824	1302	Cork Harbour - North Channel	17.90	8.10	32.0	7.30	94	53	5.3	
09	1028			Cork Harbour - Rostellian South						58.4	<4	
				Shellfish Water Regulations S.I. 268 of 2006								
				Shellfish Waters Mandatory Limits		7.0 to 9.0	<40		≥70		deviation not >10	
				Shellfish Waters Guide Limits		n/a	12 to 38		≥80		n/a	
				Compliance with Shellfish Waters Mandatory Limits	yes	yes	yes	n/a	yes	n/a	n/a	yes
				Compliance with Shellfish Waters Guide Limits	yes	yes	yes	n/a	yes	n/a	n/a	n/a

Copy of Marine Institute Monitoring Data -Cork Harbour Shellfish Water Monitoring Programme compliance with SI 268 of 2006

Year	Sample Date	Time	Station	Designated Shellfish Water Area (with 1Km buffer)	Water Framework Directive Area (with 1Km buffer)	Probe temp	Probe pH	Probe salinity	Probe DO (mg/L)	Probe DO (% Sat)	Suspend Solids (mg/L)
09	1027 01/12/09	18:00	Cork Harbour - Rostellian North	Rostellian North	Cork Harbour	8.03	7.11	25.30	9.23	92.00	58.7
09	1028		Cork Harbour - Rostellian South	Rostellian North	Cork Harbour						58.4
09	1080 29/12/09	11:25	Cork Harbour - Rostellian South	Rostellian South	Cork Harbour	6.60		30.70	9.80	98.00	36.3
09	1026 01/12/09	17:20	Cork Harbour - North Channel	Cork Great Island North Channel	North Channel Great Island	7.57	8.16	23.79	9.58	93.50	35.9

Shellfish Water Regulations S.I. 268 of 2006

Shellfish Waters Mandatory Limits	7.0 to 9.0	<40	≥70
Shellfish Waters Guide Limits	n/a	12 to 38	≥80
Compliance with Shellfish Waters Mandatory Limits	yes	yes	yes
Compliance with Shellfish Waters Guide Limits	yes	yes	yes

7.0 to 9.0	<40	≥70
n/a	12 to 38	≥80
yes	yes	yes
yes	yes	yes

Copy of Marine Institute Monitoring Data -Cork Harbour Shellfish Water Monitoring Programme compliance with SI 268 of 2006

myear	Sample	Sub Sample	Cruise	Date (Yymmdd)	Station	Shellfish Area	WFD WBS (with 1km buffer)	Fixed Lat	Fixed Long	Actual Lat	Actual Long	Species (Latin)	# in Sample	Purpose	Temp	p H	Salinity	DO (mg/L)	DO (%sat)	TSS	Weather	
2008	83 1		SW/08	08/10/29	Cork Harbour - North Channel	Cork Great Island North Channel	North Channel Great Island	51.8837	-8.2670	51.8810	-8.2593	Mytilus edulis	47 SH		8.53	7.74	27	9.72	99.0			
2008	84 1		SW/08	08/10/29	Cork Harbour - Malin		Cork Harbour	51.8513	-8.2803	51.8513	-8.2803	Mytilus edulis	49 SH		10.5	7.74	26.6	13.4	142			
2008	85 1		SW/08	08/10/29	Cork Harbour - Fingaskiddy		Cork Harbour	51.8312	-8.3000	51.8307	-8.2973	Mytilus edulis	90 T		10.9	7.83	28.4	12.0	129	78.6 F		
2008	85 2		SW/08	08/10/29	Cork Harbour - Fingaskiddy		Cork Harbour	51.8312	-8.3000	51.8307	-8.2973	Mytilus edulis	90 T		10.9	7.83	28.4	12.0	129	78.6 F		
2008	85 3		SW/08	08/10/29	Cork Harbour - Fingaskiddy		Cork Harbour	51.8312	-8.3000	51.8307	-8.2973	Mytilus edulis	90 T		10.9	7.83	28.4	12.0	129	78.6 F		
2008	146 1		SW/08	08/12/10	Cork Harbour - Rosstellan North		North Channel Great Island	51.8837	-8.2670	51.8830	-8.2440	Crasostrea gigas	25 SH				28.4					
2008	147 1		SW/08	08/12/10	Cork Harbour - Rosstellan North		Cork Harbour	51.8577	-8.1963	51.8575	-8.1957	Mytilus edulis	50 SH									
2008	148 1		SW/08	08/12/10	Cork Harbour - Rosstellan South		Cork Harbour	51.8492	-8.1953	51.8492	-8.1947	Crasostrea gigas	11 SH									
2009	54 1		SW/09	09/08/04	Cork Harbour - North Channel		North Channel Great Island	51.8837	-8.2670	51.8762	-8.2583	Mytilus edulis	50 SH									W
2009	55 1		SW/09	09/08/04	Cork Harbour - Rosstellan South		Cork Harbour	51.8492	-8.1953	51.8500	-8.1920	Crasostrea gigas	19 SH									W
2009	68 1		SW/09	09/08/11	Cork Harbour - Fingaskiddy		Cork Harbour	51.8577	-8.1963			Crasostrea gigas	9 SH									F
2009	69 1		SW/09	09/08/11	Cork Harbour - North Channel		Cork Great Island North Channel	51.8837	-8.2670	51.8848	-8.2422	Mytilus edulis	50 SH									F
2009	105 1		SW/09		Cork Harbour - Fingaskiddy		Cork Harbour	51.8312	-8.3000	51.8308	-8.3005	Mytilus edulis	60 T		14.2	7.85	28.7		105	278		
2009	105 2		SW/09		Cork Harbour - Fingaskiddy		Cork Harbour	51.8312	-8.3000	51.8308	-8.3005	Mytilus edulis	60 T		14.2	7.85	28.7		105	278		
2009	105 3		SW/09		Cork Harbour - Fingaskiddy		Cork Harbour	51.8312	-8.3000	51.8308	-8.3005	Mytilus edulis	60 T		14.2	7.85	28.7		105	278		
2009	4023 1		SW/09	09/11/13	Cork Harbour - North Channel		Cork Great Island North Channel	51.8837	-8.2670			Crasostrea gigas	25 SH									W/R
2009	4024 1		SW/09	09/11/13	Cork Harbour - North Channel		Cork Great Island North Channel	51.8837	-8.2670			Mytilus edulis	50 SH									W/R
2009	4025 1		SW/09	09/11/13	Cork Harbour - Rosstellan North		Cork Harbour	51.8577	-8.1963			Crasostrea gigas	13 SH									W/R
Shellfish Water Regulations S.I. 268 of 2006																						
Shellfish Waters Mandatory Limits																						
Shellfish Waters Guide Limits																						
Compliance with Shellfish Waters Mandatory Limits																						
Compliance with Shellfish Waters Guide Limits																						
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Shellfish Waters Guide Limits																						
Compliance with Shellfish Waters Mandatory Limits																						
Compliance with Shellfish Waters Guide Limits																						

Copy of Marine Insite

myear	Sample Culture Type	Time High Tide	Programme	# in pool	Length (min)	Length (mean)	Length (max)	Length (stdev)	% Lipids	% Moisture	Tissue	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls		
												CB101 (ug kg ⁻¹ WW)	CB105 (ug kg ⁻¹ WW)	CB114 (ug kg ⁻¹ WW)	CB118 (ug kg ⁻¹ WW)	CB123 (ug kg ⁻¹ WW)	CB126 (ug kg ⁻¹ WW)	CB138 (ug kg ⁻¹ WW)	CB149 (ug kg ⁻¹ WW)	CB153 (ug kg ⁻¹ WW)	CB156 (ug kg ⁻¹ WW)	CB157 (ug kg ⁻¹ WW)	CB167 (ug kg ⁻¹ WW)	CB169 (ug kg ⁻¹ WW)					
2008	83 B		Spatial	47	42.0	50.8	56.0	3.35		72.5 S8																			
2008	84 B		Spatial	49	42.0	51.8	60.0	3.80		76.3 S9																			
2008	85 WB		Shellfish	30	40.0	44.6	49.5	3.00	1.21	76.8 S9																			
2008	85 WB		Shellfish	30	40.5	45.4	49.5	2.51	1.21	76.4 S9																			
2008	85 WB		Shellfish	30	41.0	45.0	49.5	2.58	1.21	77.0 S9																			
2008	146 T		Shellfish SWD	25	79.0	113	147	18.5	1.45	81.2 S9	1.3	nd																	
2008	147 T		SWD	50	43.5	50.0	56.0	3.31	0.87	75.6 S9	0.37	0.11																	
2008	148 T		SWD	11	101	127	148	14.8	1.50	77.9 S9		0.12																	
2009	54 I	0515	SWD	50	41.5	51.6	58.0	4.40	1.10	73.4 S9	0.13	<0.12																	
2009	55 T	0515	SWD	19	70.0	124	222	40.2	2.00	77.5 S9	<0.5	<0.61																	
2009	68 T	0951	SWD	9	87.0	137	210	38.3	3.12	81.7 S9	0.29	<0.54																	
2009	69	0951	SWD	50	41.0	50.2	60.0	6.00	1.38	74.5 S9	0.2	nd																	
2009	105 B		Trend Shellfish	22	40.0	46.1	50.0	3.51	1.52	84.3 S9																			
2009	105 B		Trend Shellfish	22	40.0	45.3	50.0	3.46	1.52	85.3 S9	0.16	0.02																	
2009	105 B		Shellfish	16	50.5	51.3	52.0	0.58	1.52	84.8 S9																			
2009	4023 T	1800	Shellfish SWD	25	75.5	107	148	20.8	2.24	82.6 S9	0.24	0.16																	
2009	4024 I	1800	SWD	50	41.0	48.6	53.5	4.50	2.45	80.8 S9	<0.42	0.04																	
2009	4025 T	1800	SWD	13	82.0	138	200	32.3	3.72	82.3 S9	<0.56	<0.01																	
Shellfish Water Regulations:																													
Shellfish Waters Mandatory Limit	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Total of 300 ug/kg @ 1 Percent lipid (total of 0.30ug/litre seawater)																	
Compliance with Shellfish W/n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes																	

myear	Copy of Marine Institute																																
	Sample	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)	Chlorobiphenyls (ug Kg-1 WW)		
2008	83																																
2008	84																																
2008	85																																
2008	85																																
2008	85																																
2008	146																																
2008	147																																
2008	148																																
2009	54	nd (<0.001)	0.04	0.04	0.04	nd (<0.001)	nd (<0.001)	nd (<0.001)	nd (<0.001)	0.04	0.04	nd (<0.13)	nd (<0.001)	nd (<0.001)	0.04	nd (<0.001)	0.04	<0.33	0.004	0.0003	0.59	0.57	0.66	0.64	0.66	0.64	0.66	0.64	0.66	6E-05	9E-05	7E-05	6E-05
2009	55	nd (<0.001)	0.07	0.07	0.07	nd (<0.001)	nd (<0.001)	nd (<0.001)	nd (<0.001)	0.19	0.19	nd (<0.13)	nd (<0.001)	nd (<0.001)	0.19	nd (<0.003)	0.16	<0.82	0.004	0.0003	0.59	0.57	0.66	0.64	0.66	0.64	0.66	0.64	0.66	0.64	0.66	0.64	0.66
2009	68	nd (<0.001)	0.08	0.08	0.08	nd (<0.001)	nd (<0.001)	nd (<0.001)	nd (<0.001)	0.15	0.15	nd (<0.13)	nd (<0.001)	nd (<0.001)	0.15	nd (<0.003)	0.36	0.42	0.004	0.0003	0.59	0.57	0.66	0.64	0.66	0.64	0.66	0.64	0.66	0.64	0.66	0.64	0.66
2009	69	nd (<0.24)	0.04	0.04	0.04	nd (<0.001)	nd (<0.001)	nd (<0.001)	nd (<0.001)	<0.08	<0.08	nd (<0.13)	nd (<0.001)	nd (<0.001)	<0.08	nd (<0.003)	0.36	0.42	0.004	0.0003	0.59	0.57	0.66	0.64	0.66	0.64	0.66	0.64	0.66	0.64	0.66	0.64	0.66
2009	105																																
2009	105																																
2009	105																																
2009	105																																
2009	4023	<0.006																															
2009	4024	0.01	0.02																														
2009	4025	<0.01																															
Shellfish Water Regulations:																																	
Shellfish Waters Mandatory Limit																																	
Shellfish Waters Guide Limit																																	
Compliance with Shellfish W																																	

myser	Sample	ALD (ug kg-1 WW)	CCDAN (ug kg-1 WW)	DIELD (ug kg-1 WW)	EDAN (WW)	END (ug kg-1 WW)	CCDAN (ug kg-1 WW)	SDRINM (ug kg-1 WW)	SDRINME (ug kg-1 WW)	TCDAN (ug kg-1 WW)	TNOC (ug kg-1 WW)	DDEOP (ug kg-1 WW)	DDEPP (ug kg-1 WW)	DDTOP (ug kg-1 WW)	DDTTP (ug kg-1 WW)	SDOT (ug kg-1 WW)	SDOTE (ug kg-1 WW)	SDOTM (ug kg-1 WW)	
2008	83																		
2008	84																		
2008	85																		
2008	85																		
2008	85																		
2008	146	0.07	0.06	0.24	0.3		0.02	0.31	0.31	nd (<0.09)	0.13		0.92	0.05		0.23		1.74	
2008	147	nd (<0.001)	0.07	0.58	0.32	0.01	0.08	0.59	0.59	0.09	0.08		0.64	0.06				1.03	
2008	148	nd (<0.001)	0.12	0.59		0.03		0.62	0.62	0.11	0.13		0.99	0.07				1.52	
2009	54	<0.006	0.02	0.32		nd (<0.006)	0.01	0.33	0.32	0.08	0.01	0.01	0.43	nd (<0.001)	<0.12			0.56	
2009	55	<0.006	0.03	0.34		nd (<0.006)	0.002	0.35	0.34	<0.63	0.002	0.02	1.37	nd (<0.001)	0.43			1.85	
2009	68	0.03	nd (<0.02)	0.4		0.02		0.45	0.45	<0.02	<0.02	nd (<0.001)	1.12	0.04	nd (<0.001)			1.42	
2009	69	nd (<0.008)	0.03			nd (<0.008)	0.02	0.02	0		0.02		0.5	0.03	0.08			0.81	
2009	105																		
2009	105																		
2009	105																		
2009	4023	nd (<0.003)	0.11	0.25		0.04	nd (<0.003)	0.29	0.29	0.11	0.04		0.65	nd (<0.01)	<0.19			1.1	
2009	4024	nd (<0.003)	0.15	0.78		nd (<0.003)	nd (<0.003)	0.79	0.78	0.13	0.03	nd (<0.003)	0.74	<0.12	nd (<0.003)	1.12	0.99	1.12	
2009	4025	nd (<0.003)	0.24	0.74		nd (<0.003)	nd (<0.003)	0.75	0.74	0.17	0.07		1.44	<0.15	nd (<0.003)			1.99	
Shellfish Water Regulations																			
Shellfish Waters Mandatory																			
Shellfish Waters Guide Limit																			
Compliance with Shellfish W																			

Year	Sample	Dichloro-diphenyl-oxethane (DDT's)		Dichloro-diphenyl-oxethane (DDT's)		Dichloro-diphenyl-oxethane (DDT's)		Dioxins		Dioxins		Dioxins		Dioxins		Dioxins		Dioxins		Dioxins		Dioxins		Dioxins		Dioxins		Dioxins		Dioxins												
		SDDTME (ug Kg-1 WW)	TDEOP (ug Kg-1 WW)	TDEOP (ug Kg-1 WW)	TDEOP (ug Kg-1 WW)	CDD1N (pg Kg-1 WW)	CDD4X (pg Kg-1 WW)	CDD6P (pg Kg-1 WW)	CDD6X (pg Kg-1 WW)	CDD9X (pg Kg-1 WW)	CDDO (pg Kg-1 WW)	CDF2N (pg Kg-1 WW)	CDF2T (pg Kg-1 WW)	CDF4X (pg Kg-1 WW)	CDF6P (pg Kg-1 WW)	CDF6X (pg Kg-1 WW)	CDF9P (pg Kg-1 WW)	CDF9X (pg Kg-1 WW)	CDFDX (pg Kg-1 WW)	COFO (pg Kg-1 WW)	COFP2 (pg Kg-1 WW)	TODD (pg Kg-1 WW)	TESCBED (pg Kg-1 WW)	CFW05E (pg Kg-1 WW)	CFW05I (pg Kg-1 WW)																	
2008	83																																									
2008	84																																									
2008	85																																									
2008	85																																									
2008	85																																									
2008	86																																									
2008	146	1.74																																								
2008	147	1.03																																								
2008	148	1.52																																								
2009	54	0.44	nd (<0.001)																																							
2009	55	1.85	0.03																																							
2009	68	1.42	0.26																																							
2009	69	0.8	nd (<0.008)			0.19																																				
2009	105																																									
2009	105										40																															
2009	4023	0.9	nd (<0.003)																																							
2009	4024	0.99	nd (<0.003)																																							
2009	4025	1.83	nd (<0.003)			0.39																																				
Shellfish Water Regulations																																										
Shellfish Waters Mandatory																																										
Shellfish Waters Guide Limit																																										
Compliance with Shellfish W																																										

Copy of Marine Institute		Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Hexachlorocyclohexanes (ug Kg ⁻¹ WW)	Hexachlorocyclopentanones (ug Kg ⁻¹ WW)	Heptachlorocyclohexanes (ug Kg ⁻¹ WW)	HCHG (ug Kg ⁻¹ WW)	As (mg Kg ⁻¹ WW)	As (mg Kg ⁻¹ WW)	CD (mg Kg ⁻¹ WW)	CR (mg Kg ⁻¹ WW)	CU (mg Kg ⁻¹ WW)	HG (mg Kg ⁻¹ WW)	NI (mg Kg ⁻¹ WW)	Pb (mg Kg ⁻¹ WW)	ZN (mg Kg ⁻¹ WW)	Organobromines (ug Kg ⁻¹ WW)
myer	Sample	TESGBCD CW98E (ug Kg ⁻¹ WW)	TESGBCD CW98B (ug Kg ⁻¹ WW)	TESGBCD W08E (pg Kg ⁻¹ WW)	TESGBCD W03A (pg Kg ⁻¹ WW)	TESGBCD W98E (pg Kg ⁻¹ WW)	TESGBCD W98B (pg Kg ⁻¹ WW)	HCHA (ug Kg ⁻¹ WW)	HCHB (ug Kg ⁻¹ WW)	HCHG (ug Kg ⁻¹ WW)	As (mg Kg ⁻¹ WW)	As (mg Kg ⁻¹ WW)	CD (mg Kg ⁻¹ WW)	CR (mg Kg ⁻¹ WW)	CU (mg Kg ⁻¹ WW)	HG (mg Kg ⁻¹ WW)	NI (mg Kg ⁻¹ WW)	Pb (mg Kg ⁻¹ WW)	ZN (mg Kg ⁻¹ WW)	BD100 (ug Kg ⁻¹ WW)			
2008	83										-0.01	2.09	0.1	0.09	1.9	0.03	<-0.13	0.39	16				
2008	84										nd (<0.003)	2.13	0.07	0.09	2.4	0.02	<-0.13	0.55	21.1				
2008	85										0.01	2.13	0.1	0.23	3.09	0.02	0.15	0.38	22	0.19			
2008	85										0.01	2.5	0.1	0.13	3.02	0.02	<-0.13	0.37	21.9				
2008	85										0.02	2.25	0.1	0.14	3.12	0.02	0.14	0.39	22.4				
2008	146										0.29	2.03	0.19	0.1	19.8	0.03	<-0.13	0.27	29.1				
2008	147										<-0.09	2.05	0.15	0.2	1.85	0.03	0.13	0.53	17.9				
2008	148										<-0.15	1.53	2.14	0.29	44.4	0.05	<-0.13	0.38	638				
2009	54										0.05	0.02	0.03	0.17	2	0.03	<-0.13	0.27	13.7				
2009	55										0.11	2.44	0.15	0.13	19.5	0.03	<-0.13	0.27	455				
2009	68										nd (<0.001)	0.67	0.13	0.09	17.5	0.03	<-0.13	0.26	349				
2009	69										0.04	1.55	0.05	0.15	1.37	0.02	<-0.13	0.46	11.4				
2009	105										0.05	2.4	0.08	0.27	2.12	0.02	0.19	0.17	20.7	0.01			
2009	105	0.24		113		147					0.06	2.74	0.08	0.26	1.77	0.23	0.23	0.16	20.5				
2009	105										0.03	2.61	0.07	0.31	1.24	0.22	0.22	0.16	20.3				
2009	4023										0.01	2	0.09	0.07	5.59	0.02	<-0.13	0.23	138				
2009	4024										0.03	1.6	0.07	0.18	1.31	0.02	<-0.13	0.34	12.9				
2009	4025										0.02	1.51	0.13	0.06	15.6	0.02	<-0.13	0.19	288				
Shellfish Water Regulations																							
Shellfish Waters Mandatory																							
Shellfish Waters Guide Limit																							
Compliance with Shellfish W																							
Compliance with Shellfish W																							

Year	Sample	BD119 (ug kg-1 WW)	BD126 (ug kg-1 WW)	BD138 (ug kg-1 WW)	BD153 (ug kg-1 WW)	BD154 (ug kg-1 WW)	BD156 (ug kg-1 WW)	BD183 (ug kg-1 WW)	BD184 (ug kg-1 WW)	BD191 (ug kg-1 WW)	BD196 (ug kg-1 WW)	BD197 (ug kg-1 WW)	BD206 (ug kg-1 WW)	BD207 (ug kg-1 WW)	BD209 (ug kg-1 WW)	BD217 (ug kg-1 WW)	BD228 (ug kg-1 WW)	BD247 (ug kg-1 WW)	BD249 (ug kg-1 WW)	BD266 (ug kg-1 WW)	BD271 (ug kg-1 WW)	BD277 (ug kg-1 WW)	BD285 (ug kg-1 WW)	BD299 (ug kg-1 WW)	
2008	83																								
2008	84																								
2008	85	<-0.008	<-0.008	<-0.01	0.02	0.02	<-0.01	<-0.02	<-0.02	<-0.02	<-0.04	<-0.04	<-0.08	<-0.08	0.64	0.02	0.01	0.76	0.08	0.03	<-0.008	<-0.008	0.03	0.52	
2008	85																								
2008	85																								
2008	146																								
2008	147																								
2008	148																								
2009	54																								
2009	55																								
2009	68																								
2009	69																								
2009	105	<-0.01	<-0.01	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.1	<-0.1	<-0.41	<-0.004	<-0.004	0.04	<-0.01	<-0.01	<-0.01	<-0.01	<-0.01	<-0.01	0.02
2009	105																								
2009	105																								
2009	4023																								
2009	4024																								
2009	4025																								
Shellfish Water Regulations:																									
Shellfish Waters Mandatory Limit																									
Shellfish Waters Guide Limit																									
Compliance with Shellfish W																									

Year	Sample	Organobromines (ug Kg-1 WW)	Organobromines (ug Kg-1 WW)	Organobromines (ug Kg-1 WW)	Organobromines (ug Kg-1 WW)	Organobromines (ug Kg-1 WW)	Organobromines (ug Kg-1 WW)	Organobromines (ug Kg-1 WW)	Organobromines (ug Kg-1 WW)	Organobromines (ug Kg-1 WW)	Organobromines (ug Kg-1 WW)	Organochlorines (ug Kg-1 WW)	Organochlorines (ug Kg-1 WW)	Organochlorines (ug Kg-1 WW)	Organochlorines (ug Kg-1 WW)	Organochlorines (ug Kg-1 WW)	Organochlorines (ug Kg-1 WW)	Organochlorines (ug Kg-1 WW)	Organochlorines (ug Kg-1 WW)	Organochlorines (ug Kg-1 WW)	Organochlorines (ug Kg-1 WW)	Organofluorines (ug Kg-1 WW)	Organofluorines (ug Kg-1 WW)	Organofluorines (ug Kg-1 WW)	Organofluorines (ug Kg-1 WW)	Organofluorines (ug Kg-1 WW)	Organofluorines (ug Kg-1 WW)			
2008	83																													
2008	84																													
2008	85	13.3	nd (-)	0.05	nd (-)	nd (-)	nd (-)	0.24	1.52	1.52	0.86	0.03																		
2008	85																													
2008	85																													
2008	146																													
2008	147																													
2008	148																													
2009	54																													
2009	55																													
2009	68																													
2009	69																													
2009	105	0.73	nd (-)	nd (-)	nd (-)	nd (-)	0.03	0.03	0.11	0.07	0.04	nd (-)																		
2009	105																													
2009	105																													
2009	4023																													
2009	4024																													
2009	4025																													
Shellfish Water Regulations:																														
Shellfish Waters Mandatory Compliance with Shellfish W																														
Shellfish Waters Guide Limit																														
Compliance with Shellfish W																														

Copy of Marine Insti				
myear	Sample	Organolluon/ nes	Organolluon/ nes	Pesticides (general)
		SFPOSQA E (ug Kg-1 WW)	SFPOSQA (ug Kg-1 WW)	ENDS (ug Kg-1 WW)
2008	83			
2008	84			
2008	85			
2008	85	nd (<)	0.4	
2008	85			
2008	146			nd (<0.09)
2008	147			nd (<0.006)
2008	148			<0.02
2009	54			
2009	55			
2009	68			0.004
2009	69			nd (<0.006)
2009	105			
2009	105			
2009	105			
2009	4023			<0.008
2009	4024			nd (<0.003)
2009	4025			nd (<0.003)
Shellfish Water Regulations				
Shellfish Waters Mandatory I				
Shellfish Waters Guide Limit				
Compliance with Shellfish W				
Compliance with Shellfish W				

2010 harbour data (Data Source Harbour Monitoring by EPA) Transitional Waters Loch Mahon

Lee Estuary Upper	LE030-LE140
Lee Estuary Lower	LE150-LE180
Lough Mahon	LE310-LE360
Owenacurra	LE510-LE530
North Channel	LE400s; LE540-LE550
Glashaboy Estuary	LE200s
Cork Harbour	LE380,610,620
Outer Cork Harbol	LE630, 800s
LM_harpers_islanc	LE350
Rivers	LE000, 010, 020, 200, 500, 505

Counter	Station No	Sample Label	Survey Date	Time Clock	Depth Bed	Sample Depth S	Salinity ‰	Temp S °C	pH	Secchi m	DO S % Sat	B.O.D. mg/l O2	TON mg/l N	NH3 mg/l N	PO4 µg/l P	Chlorophyll a mg/m ³	Si_est µg/l Si	Lab. Number	DIN mg/l N	Free NH3 mg/l N	
																					DO S % Sat
103457	LE330	LE330S	09/02/2010	10:57	9.4	0	9.93	5.75	7.8	1.7	91.4	0.9999	2.4	0.13	36	3	3000	1000703	2.53	0.00131	
103465	LE310	LE310B	09/02/2010	10:42	8.4	8	30.86	8.05	7.9	1	89		0.4	0.17	54	2.9	900	1000702	0.57	0.00259	
103546	LE330	LE330SR	09/02/2010	15:43	10.3	0	10.55	6.03	7.8	1.5	95.1	0.9999	2.2	0.13	35	2.3	3000	1000723	2.33	0.00134	
103568	LE310	LE310S	09/02/2010	10:42	8.4	0	12.19	6.21	7.7	1	94.7		2.3	0.13	40	2.1	3100	1000701	2.43	0.00108	
103603	LE330	LE330BR	09/02/2010	15:43	10.3	10.1	32.07	8.9	7.9	1.5	92.1	0.9999	0.3	0.1	30	1.9	800	1000724	0.4	0.00163	
103606	LE340	LE340S	09/02/2010	11:01	10.2	0	10.27	5.77	7.8	1.9	94		2.2	0.13	37	1.9	2800	1000705	2.33	0.00131	
103650	LE330	LE330B	09/02/2010	10:57	9.4	9.1	31.01	8.05	7.9	1.7	90.1	0.9999	0.4	0.15	38	1.6	900	1000704	0.55	0.00228	
103651	LE340	LE340B	09/02/2010	11:01	10.2	9.9	32.34	8.11	7.9	1.9	92.5		0.3	0.07	25	1.6	800	1000706	0.37	0.00107	
103743	LE350	LE350S	10/02/2010	13:15		0	20.83	5.15	7.8		94.2	0.9999	1.5	0.31	44	0.9	2100	1000753	1.81	0.00298	
103148	LE310	LE310S	21/06/2010	10:04	8	0	29.22	18.65	8.3	1	144.6		0.22	0.119	9	12.9	49.999	1003188	0.339	0.00968	
103150	LE330	LE330S	21/06/2010	11:00	9.4	0	30.94	18.28	8.3	1.1	129.1	2	0.15	0.114	23	12.7	49.999	1003190	0.264	0.00904	
103167	LE310	LE310B	21/06/2010	10:04	8	7.5	31.87	17.66	8.2	1	111.9		0.12	0.131	14	11.5	49.999	1003189	0.251	0.008	
103170	LE340	LE340S	21/06/2010	11:02	12	0	31.46	17.85	8.2	1.3	125.3		0.049999	0.071	12	11.4	100	1003192	0.120999	0.0044	
103180	LE330	LE330SR	21/06/2010	15:04	9.5	0	31.14	18.94	8.3	1.2	149.7	3	0.12	0.126	13	10.4	49.999	1003206	0.246	0.01045	
103189	LE330	LE330B	21/06/2010	11:02	9.4	8.5	31.76	17.72	8.2	1.1	114.3	2	0.11	0.106	21	9.5	100	1003191	0.216	0.0065	
103216	LE340	LE340B	21/06/2010	11:02	12	11.5	32.31	17.26	8.3	1.3	111.7		0.13	0.053	8	8.1	49.999	1003193	0.183	0.00391	
103222	LE330	LE330BR	21/06/2010	15:04	9.5	9	32.26	17.33	8.2	1.2	113	0.9999	0.049999	0.113	17	7.8	100	1003207	0.162999	0.00675	
103156	LE310	LE310B	18/08/2010	10:30	9.7	9.2	32.31	15.76	8.1	2	95	0.9999	0.11	0.127	15	12.4	100	1004480	0.237	0.00543	
103158	LE330	LE330S	18/08/2010	10:50	9.5	0	31.15	16.03	8.1	1.9	107	2	0.17	0.161	21	12.3	49.999	1004481	0.331	0.00702	
103178	LE340	LE340S	18/08/2010	11:10	11.9	0	31.97	15.73	8.1	2	106.4		0.12	0.098	14	10.6	49.999	1004483	0.218	0.00418	
103193	LE330	LE330SR	18/08/2010	15:55	9.1	0	29.59	16.63	8.2	1.7	128.1	3	0.22	0.031	6	9.2	49.999	1004499	0.251	0.00176	
103194	LE310	LE310S	18/08/2010	10:30	9.7	0	27.53	16.07	8	2	104		0.44	0.079	14	9.2	200	1004479	0.519	0.00277	
103203	LE330	LE330B	18/08/2010	10:50	9.5	9	32.41	15.63	8.1	1.9	97.4	0.9999	0.11	0.107	10	8.6	100	1004482	0.217	0.00453	
103246	LE340	LE340B	18/08/2010	11:10	11.9	11.5	33.06	15.34	8.1	2	96.8		0.07	0.069	6	6.8	100	1004484	0.139	0.00286	
103314	LE330	LE330BR	18/08/2010	15:55	9.1	8.5	32.99	15.4	8.1	1.7	94.7	0.9999	0.07	0.081	7	4.6	100	1004500	0.151	0.00338	
103831	LE350	LE350S	19/08/2010	10:03		0	28.77	16.11	7.9	NR	84.7		0.44	0.27	38		700	1004524	0.71	0.00758	
103123	LE350	LE350S	22/09/2010	15:00		0	28.14	17.3	7.9		89.8	3	0.51	0.396	37	16.1	1100	1005208	0.906	0.01212	
103083	LE330	LE330SR	23/09/2010	16:00	9	0	31.16	15.84	8.2	1.2	130.7	7.1111	0.08	0.296	46	95.3	700	1005256	0.376	0.01589	
103084	LE330	LE330S	23/09/2010	10:05	8.3	0	30.4	15.71	8	0.9	104.6		0.19	0.235	39	57.6	800	1005236	0.425	0.00801	
103085	LE340	LE340S	23/09/2010	11:01	11	0	30.85	15.82	8.1	1.2	111.6		0.17	0.221	35	56.5	700	1005238	0.391	0.00949	
103088	LE340	LE340SR	23/09/2010	16:02	13	0	32.45	15.49	8.1	1.7	113.2		0.11	0.075	10	44.1	500	1005258	0.185	0.00315	
103100	LE340	LE340B	23/09/2010	11:01	11	10.5	31.84	15.66	8.1	1.2	107.7		0.13	0.151	19	26.5	600	1005239	0.281	0.00641	
103102	LE330	LE330B	23/09/2010	10:05	8.3	8	32.34	15.58	8.1	0.9	101.5	3	0.13	0.143	14	23.5	600	1005237	0.273	0.00604	
103129	LE330	LE330BR	23/09/2010	16:00	9	8.5	31.99	15.55	8.1	1.2	103.6	2	0.13	0.109	17	15.4	600	1005257	0.239	0.00459	
103152	LE340	LE340BR	23/09/2010	16:02	13	12	32.65	15.36	8.1	1.7	104.1		0.11	0.072	11	12.7	600	1005259	0.182	0.00299	
				Mean Value			28.6	14.0	8.1		106.1	2.2	0.5	0.1	23.3	20.2	731.4		0.6	0.0	
				95% percentile							134.87	6									

Median	31.16	14	12.3
90% percentile		51.54	
EQS Standard		≤40/≤60*	no/yes/no
Compliance		>70% or > ≤4.0 <120% or <130%*	no/no
Note*-value dependent on Salinity			
	indicates parameters for compliance purposes		

Attachment 2 Revised Project Programme

CORK LOWER HARBOUR SEWERAGE SCHEME - PROJECT PROGRAMME

Task Name	Duration (months)	2011				2012				2013				2014				2015				2016				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
DEHLG Approval of PR	7																									
Procurement of Consultants	2																									
Prerequisite Period	2																									
Assessment of Submissions	2																									
Invite Tenders	2																									
Tender Assessment	0																									
Appoint Consultants	0																									
Detailed Design & Contract Documents	12																									
DEHLG Approval of Contract Documents	6																									
Collection System Contracts	30																									
Shortlisting Procedure	6																									
Tender Period	3																									
Tender Assessment	4																									
Contract Award	0																									
Contract Start	24																									
WWTP DBO Contract	39																									
Shortlisting Procedure	6																									
Tender Period	3																									
Tender Assessment	3																									
Contract Award	6																									
Construction	0																									
Construction Complete	23																									
Construction Complete	0																									

Attachment 3

**Letter to the EPA dated
7th December 2010**

Comhairle Contae Chorcaí
Cork County Council

Halla an Chontae,
Corcaigh, Éire.
Fón: (021) 4276891 • Faics: (021) 4276321
Suíomh Gréasáin: www.corkcoco.ie
County Hall,
Cork, Ireland.
Tel: (021) 4276891 • Fax: (021) 4276321
Web: www.corkcoco.ie



Environmental Protection Agency,
P.O.Box 3000,
Johnstown Castle Estate,
County Wexford.

7th December 2010

**Re: Waste Water Discharge Licence Reg. No. D0129-01
Agglomeration of Passage West / Monkstown, County Cork.**

Dear Sir/Madam,

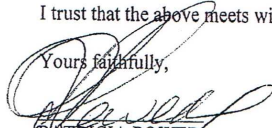
I refer to the above Licence. Cork County Council's Response to Condition 5.1 of this licence is detailed in the table below and the associated attachments.

Ref	Condition:	Response:
5.1	The licensee shall, within three months, prepare and submit to the Agency for its agreement a Project Plan for the Cork Lower Harbour Sewerage Scheme that will achieve the following objectives:	
5.1(a)	Achieve improvements in the quality of all discharges from the works;	Refer to Chapters 3, 4 & 5 of Volume 1 of the Cork Harbour Main Drainage Scheme Preliminary Report at Attachment 1 , of which Section 5.6 "Proposed Wastewater Treatment Plant" is particularly relevant.
5.1(b)	Cease discharges listed under Schedule A.3: Discharges to be Discontinued, of this licence;	Refer to the Cork Lower Harbour Scheme Project Program at Attachment 2 . Also refer to letter dated 2 nd November 2010 which states the current position at Attachment 3 .
5.1(c)	Give effect to Regulation 2 of the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007).	Refer to the Cork Lower Harbour Sewage Scheme EIS previously submitted as part of the licence application. Refer to Regulation 18-3b response dated 20 th February 2009 at Attachment 4 and An Bord Pleanála Inspector's Report at Attachment 5 , of which Section 5.0 "Assessment" is particularly relevant.



I trust that the above meets with your satisfaction.

Yours faithfully,



PATRICIA POWER
DIRECTOR OF SERVICES