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28<sup>th</sup> March 2014

IW-ER-LT0012

**Re: Kinsale Water Discharge Licence Application D0132- 01**

Dear Loretta Joyce,

In response to the EPA correspondence dated the 31<sup>st</sup> of January 2014 requesting clarification in relation to the response submitted to a request for further information in accordance with Section 18 of the Waste Water Discharge (Authorisation) Regulations 2007, Irish Water acknowledges the response issued by Cork County Council in relation to the Kinsale waste water discharge licence application (D0132-01) was submitted on behalf of Irish Water.

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

Best Regards,



Gerry Galvin

Chief Technical Advisor



## Licensing Notice - Unsolicited Correspondence - 2 for Kinsale Licence (D0132-01)

**Licence:** Kinsale (D0132-01)

**Status Reason:** Closed

**Issued On:** 01/04/2014

**Action Type:** Licensing Notice

**Status History Action:** Unsolicited Correspondence

Kinsale Unsolicited Information

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## Licensing Notice - Unsolicited Correspondence - 1 for Kinsale Licence (D0132-01)

**Licence:** Kinsale (D0132-01)

**Status Reason:** Closed

**Issued On:** 23/01/2014

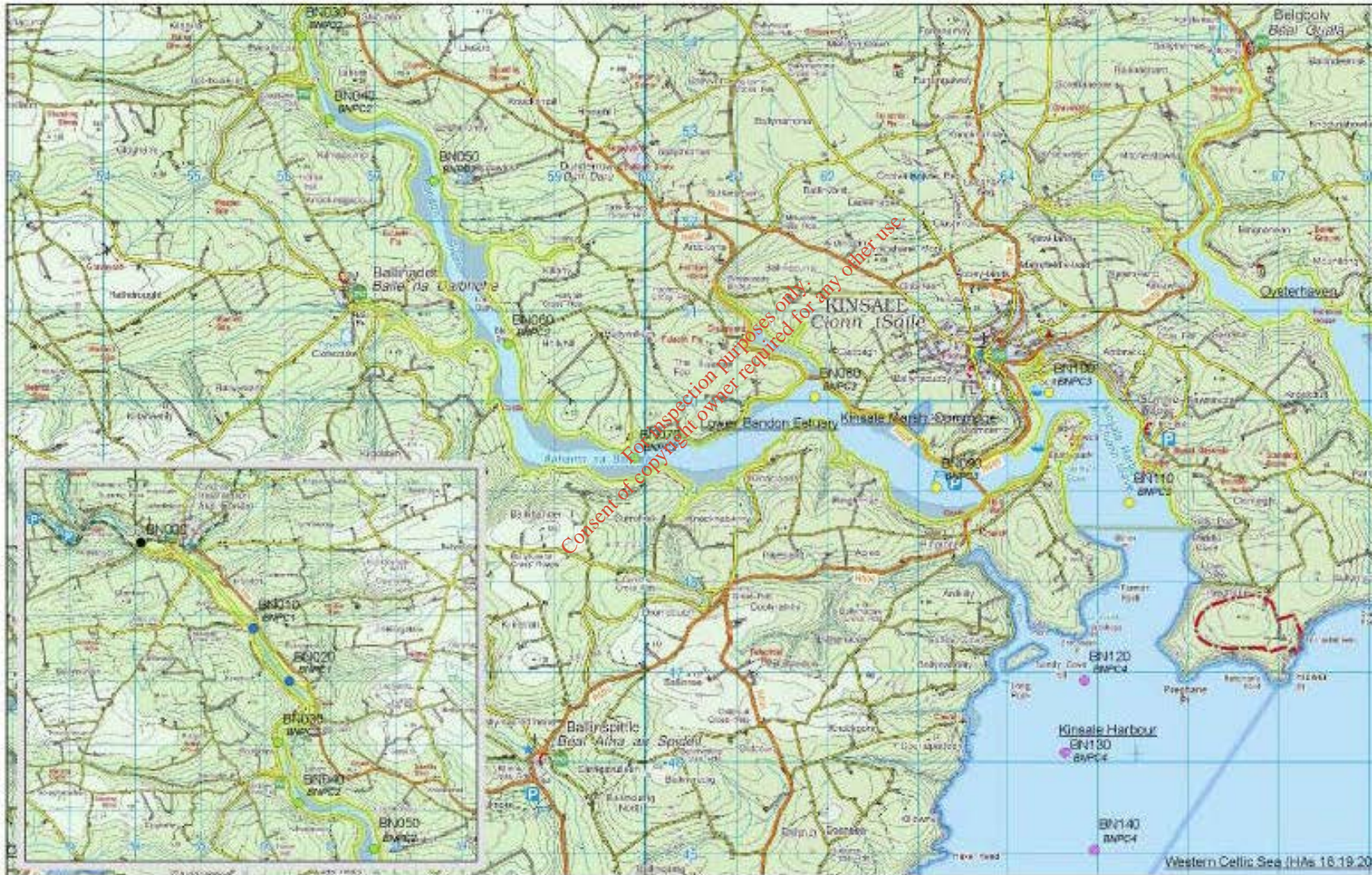
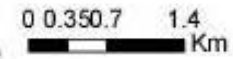
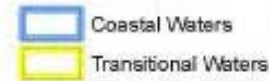
**Action Type:** Licensing Notice

**Status History Action:** Unsolicited Correspondence

See attached marine, estuary and river data and operational reports for Kinsale WWTP as requested by Eimer during recent site visit. regards, Gillian O'Sullivan Waste Water Liaison Cork Co. Council.

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# Bandon & Kinsale Harbour



Entity	Entity Ref	Station	Station Re	Station Ea	Station No	Sample T	Sample R	Sample Date	Comment
Bandon	20B02	Innishannon	RS20B020	154117	57084	WFD Oper	2012/0743	07-Mar-12	
Bandon	20B02	Innishannon	RS20B020	154117	57084	WFD Oper	2012/1071	04-Apr-12	
Bandon	20B02	Innishannon	RS20B020	154117	57084	WFD Oper	2012/3314	27-Sep-12	
Bandon	20B02	Innishannon	RS20B020	154117	57084	WFD Oper	2012/3767	07-Nov-12	
Bandon	20B02	Innishannon	RS20B020	154117	57084	WFD Oper	2012/4266	06-Dec-12	

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Hardness	Molybdate	Alkalinity	Chloride	Colour	Ammonium	Ammonium	Conductivity	Dissolved	Dissolved	Nitrate	Nitrate	Nitrite	Nitrite	pH	BOD	Temperature	Suspended	Total Nitro	
CaCO3	P	CaCO3	Cl	Hz	NH4	N	µS/cm	% O2	O2	NO3	N	NO2	N		O2	Degrees C	mg/l	mg/l	
mg/l	mg/l	mg/l	mg/l	Hazen	mg/l	mg/l			mg/l	mg/l	mg/l	mg/l	mg/l	pH units	mg/l		mg/l	mg/l	
71		56	20.9	26	0.014	0.011	190	107	12	13.3	3.00	0.027	0.008	7.9	0.7	10.1			
72	0.012	80		20	0.035	0.027	260	101	12.1	14.5	3.28	0.025	0.008	8	1.1	7.2			
	0.017	88	27.6	25	0.014	0.011	242	105.6	11.1	16	3.61	0.016	0.005	8.3	0.8	12.7			
60	0.027	52	17.8	31	0.034	0.026	175	103	12	11.7	2.64	0.019	0.006	7.8	< 1	8.9			
69	0.063	62	16.8	22	0.194	0.151	181	96	10.5	13.4	3.03	0.026	0.008	7.7	0.4	8.5			

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## General

Data contained in document	physico-chemical data
Data collected from	Co Cork
Data collected by	Environmental Protection Agency
Data collected for the purpose of	Operational Monitoring
Document created	30-Sep-11
Time span of data in document	08/02/2010-23/09/2010

## Spreadsheets

**Stations** location information.

### Columns explained:

<b>Station_No</b>	Station Number
<b>latitude</b>	Latitude
<b>longitude</b>	Longitude
<b>Location</b>	Location distription

**Bandon** physico-chemical data  
**Blackwater** physico-chemical data  
**Cork** physico-chemical data

<b>Sample_ID</b>	Record identification number
<b>Station_No</b>	Station number
<b>Sample_Label</b>	Sample Label
<b>Survey Date</b>	Date of data collection
<b>Time</b>	Time of data collection
<b>Secchi</b>	
<b>Depth Sample</b>	Depth sampled
<b>Depth Bed</b>	Depth of bed where sample was collected
<b>Salinity S ‰</b>	Salinity ( ‰)
<b>Temp °C</b>	Temperature (°C)
<b>DO mg/l</b>	Dissolved oxygen (mg/l)
<b>DO Saturation</b>	Dissolved oxygen percent saturation
<b>pH</b>	ph
<b>NH3 mg/l N</b>	mg/l N
<b>TON mg/l N</b>	Total oxidised nitrogen ( mg/l N)
<b>DIN mg/l N</b>	(TON+NH3)
<b>PO4 µg/l P</b>	µg/l P
<b>B.O.D. mg/l O2</b>	Biological Oxygen demand (mg/l O2)
<b>Chlorophyll a mg/m</b>	Chlorophyll a ( mg/m3)

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ID	Station No	Sample Label	Date Surveyed	Time	Secchi	Depth_sample	Depth Bed	Salinity	Temperature	DO mg/L	DO Saturation	pH	NH3	TON	DIN	PO4	BOD	Chl a
66	BN000	BN000S	14-Sep-10	08:00:00	VOB	0		0.14	16.1	8.4	85.2	7.5	0.093	2.05	2.143	29	2	9.4
126	BN000	BN000S	23-Jun-10	08:03:00	VOB	0		0.017	17.63	9.9	103.8	7.5	0.068	2.81	2.878	52	<2	
169	BN000	BN000S	08-Feb-10	10:03:00	VOB	0		0.08	6.4	11.1	90.4	8.0	0.03	3.1	3.13	21	<2	
210	BN000	BN000S	17-Aug-10	08:17:00				0.18	14.93	10.2	101.1	8.1	0.033	3.87	3.903	11	<2	4.9
52	BN010	BN010B	14-Sep-10	10:15:00	0.6	2.4	2.6	12.59	16.83	6.8	75.8	7.6	0.207	1.29	1.497	41	2	12.5
70	BN010	BN010B	17-Aug-10	10:25:00	0.8	1.8	2	12.09	16.46	8.8	97.1	8.0	0.05	2.21	2.26	28	2	35.5
395	BN010	BN010B	08-Feb-10	12:18:00	VOB	1.7	1.9	0.08	6.75	11.9	97.7	7.4	0.03	3.2	3.23	23		0.8
53	BN010	BN010S	14-Sep-10	10:15:00	0.6	0	2.6	9.39	16.08	7.4	79.2	7.4	0.162	1.56	1.722	39	2	13
72	BN010	BN010S	17-Aug-10	10:25:00	0.8	0	2	10.01	16.4	9.7	105.8	7.9	0.033	2.28	2.313	27	2	33.5
164	BN010	BN010S	08-Feb-10	12:18:00	VOB	0	1.9	0.08	6.74	11.9	97.7	7.4	0.03	3	3.03	24	<2	
337	BN020	BN020B	14-Sep-10	10:03:00	0.7	4.3	4.5	17.93	16.79	6.5	74.9	7.7	0.198	0.94	1.138	34		12.1
363	BN020	BN020B	17-Aug-10	10:48:00	1.0	3.3	3.5	14.45	16.34	8.9	99.5	8.0	0.051	1.69	1.741	27		37
43	BN020	BN020B	23-Jun-10	10:37:00	VOB	0.9	1	7.71	19.57	9	102.6	7.9	0.094	2.65	2.744	54	2	
371	BN020	BN020B	08-Feb-10	12:05:00	VOB	2.5	2.8	0.08	6.77	11.8	96.5	7.5	0.03	3.1	3.13	25		1.9
306	BN020	BN020BR	14-Sep-10	15:21:00	0.4	1.8	2	11.82	16.83	6.1	67.2	7.7	0.166	1.8	1.966	47		16
318	BN020	BN020S	14-Sep-10	10:03:00	0.7	0	4.5	9.58	16.38	7.4	79.8	7.6	0.173	1.52	1.693	41		17.7
385	BN020	BN020S	17-Aug-10	10:48:00	1.0	0	3.5	11.63	16.41	9.8	107.8	8.1	0.025	2.11	2.135	24		29
45	BN020	BN020S	23-Jun-10	10:37:00	VOB	0	1	1.49	18.99	9.4	102.2	7.8	0.06	2.82	2.88	49	2	
372	BN020	BN020S	08-Feb-10	12:05:00	VOB	0	2.8	0.08	6.76	11.8	96.6	7.5	0.03	3.1	3.13	25		1.7
309	BN020	BN020SR	14-Sep-10	15:21:00	0.4	0	2	1.58	16.83	8.2	85.1	7.9	0.099	2.43	2.529	45		13.5
61	BN030	BN030B	14-Sep-10	10:47:00	0.7	6.3	6.5	20.63	16.71	6.7	78.1	7.8	0.186	0.77	0.956	36	2	11.6
64	BN030	BN030B	17-Aug-10	11:02:00	0.75	5.1	5.3	19.15	16.37	8.7	100.4	8.1	0.041	1.1	1.141	31	2	3
7	BN030	BN030B	23-Jun-10	11:02:00	1.4	3.13	3.4	14.82	19.8	10.2	122	8.3	0.256	1.13	1.386	62	5	
362	BN030	BN030B	08-Feb-10	11:47:00	2.0	6.2	6.3	1.13	6.92	11.6	95.9	7.5	0.04	3.1	3.14	27		4
376	BN030	BN030BR	23-Jun-10	16:03:00	0.9	4.8	5	22.04	19.97	11.6	145.1	8.4	0.104	0.43	0.534	25		
48	BN030	BN030BR	14-Sep-10	15:35:00	0.5	4.4	4.6	7.97	16.79	6.5	70.7	7.6	0.16	1.74	1.9	44	2	11
312	BN030	BN030BR	17-Aug-10	16:01:00	1.0	3.6	3.8	11.15	16.46	10.3	113.1	8.0	0.049	2.35	2.399	44		41
397	BN030	BN030C	09-Mar-10	12:07:00	2.2	6	6.2	18.54	6.6	10.6	97.9	7.8	0.03	1.4	1.43	23		5.1
398	BN030	BN030C	09-Mar-10	12:07:00	2.2	0	6.2	0.76	5.42	12.9	102.5	7.8	0.03	1.4	1.43	23		5.1
14	BN030	BN030S	14-Sep-10	10:47:00	0.7	0	6.5	13.14	17.09	7.2	81.1	7.7	0.178	1.11	1.288	36	3	17.5
79	BN030	BN030S	17-Aug-10	11:02:00	0.75	0	5.3	15.74	16.42	9.4	105.8	8.1	0.026	1.55	1.576	24	2	37
9	BN030	BN030S	23-Jun-10	11:02:00	1.4	0	3.4	4.52	19.53	10.5	118.1	8.0	0.148	2.38	2.528	66	4	
366	BN030	BN030S	08-Feb-10	11:47:00	2.0	0	6.3	0.19	6.79	11.8	96.9	7.8	0.03	3.2	3.23	26		3.1
408	BN030	BN030SR	23-Jun-10	16:03:00	0.9	0	5	17.53	20.28	15.5	190	8.7	0.099	0.68	0.779	21		
128	BN030	BN030SR	14-Sep-10	15:35:00	0.5	0	4.6	4.1	17.02	7.4	78.2	7.6	0.122	2.17	2.292	47	<2	12.5
396	BN030	BN030SR	17-Aug-10	16:01:00	1.0	0	3.8	6.92	16.55	11	117.4	8.1	0.034	2.62	2.654	23		22.5
364	BN040	BN040B	14-Sep-10	11:00:00	0.8	4.5	4.8	21.81	16.68	6.9	81.2	7.8	0.184	0.69	0.874	27		7.5
67	BN040	BN040B	17-Aug-10	11:27:00	0.9	3.5	3.7	22.95	16.31	8.7	101.6	8.1	0.06	0.79	0.85	29	2	34.9
319	BN040	BN040B	23-Jun-10	11:45:00	1.1	2.5	2.4	17.2	19.81	12.1	146.4	8.3	0.147	1.32	1.467	41		
332	BN040	BN040B	08-Feb-10	11:26:00	1.4	4.8	5.1	11.95	7.31	9.8	88	7.5	0.07	2.4	2.47	34		4
21	BN040	BN040BR	23-Jun-10	16:17:00	0.9	4.3	4.5	24.03	19.69	11	138.2	8.4	0.079	0.32	0.399	16	3	
563	BN040	BN040BR	14-Sep-10	16:14:00	0.4	1.5	1.6	8.34	16.84	6.7	72.7							
336	BN040	BN040S	14-Sep-10	11:00:00	0.8	0	4.8	18.37	16.98	7.1	82	7.8	0.179	1	1.179	34		14.7
73	BN040	BN040S	17-Aug-10	11:27:00	0.9	0	3.7	19.15	16.49	9.6	111	8.1	0.017	1.22	1.237	27	2	34.8
315	BN040	BN040S	23-Jun-10	11:45:00	1.1	0	2.4	7.64	19.86	14.5	166.8	8.4	0.104	2.05	2.154	42		
152	BN040	BN040S	08-Feb-10	11:26:00	1.4	0	5.1	0.86	96.9	7.8	0.04	3	3.04	29	<2		2.1	
6	BN040	BN040SR	23-Jun-10	16:17:00	0.9	0	4.5	18.3	20.86	15.2	187.2	8.5	0.121	0.55	0.671	29	6	
564	BN040	BN040SR	14-Sep-10	16:14:00	0.4	0	1.6	6.04	17.17	7.2	77.7							
463	BN050	BN050B	23-Jun-10	16:32:00	1.1	4.2	4.5	26.13	19.34	9.9	125.5	8.3	0.085	0.24	0.325	14		
90	BN050	BN050B	14-Sep-10	11:11:00	0.9	3.4	3.6	26.68	16.39	6.9	83.4	7.9	0.162	0.43	0.592	20	2	3.8
437	BN050	BN050B	17-Aug-10	11:45:00	1.0	3.3	3.5	25.87	16.13	8.3	98.4	8.1	0.05	0.49	0.54	18		33.7
327	BN050	BN050B	08-Feb-10	11:08:00	1.1	2.8	3	5.76	6.92	11.1	94.4	7.6	0.07	2.2	2.27	36		3.4
56	BN050	BN050BR	14-Sep-10	16:02:00	0.5	1.2	1.5	18.26	17.06	6.8	75.1	7.7	0.177	1.42	1.597	37	2	10.3
494	BN050	BN050S	23-Jun-10	16:32:00	1.1	0	3.5	22.78	20.06	12.3	154.8	8.5	0.039	0.35	0.389	7		
461	BN050	BN050S	17-Aug-10	11:45:00	1.0	0	3	23.72	16.41	9.2	108.3	8.1	0.023	0.61	0.633	14		15
63	BN050	BN050S	14-Sep-10	11:11:00	0.9	0	3.6	20.77	16.22	7.5	86.1	7.8	0.175	0.76	0.935	32	2	10.7
342	BN050	BN050S	08-Feb-10	11:08:00	1.1	0	3	1.97	6.6	11.8	97.4	7.9	0.04	2.9	2.94	31		1.5
49	BN050	BN050SR	14-Sep-10	16:02:00	0.5	0	1.4	8.59	17.22	7.2	79.4	7.7	0.152	1.65	1.802	42	2	12.3
462	BN060	BN060B	17-Aug-10	12:00:00	1.2	3.6	3.8	29.01	15.81	8	96.9	8.1	0.047	0.26	0.307	14		9.8
444	BN060	BN060B	14-Sep-10	11:03:00	1	4.4	4.7	28.62	16.24	6.9	84.2	7.9	0.132	0.33	0.462	17		4.1
324	BN060	BN060B	08-Feb-10	10:54:00	0.8	3.5	3.7	25.99	7.9	8.7	86.6	7.8	0.09	1	1.09	37		2
340	BN060	BN060BR	08-Feb-10	12:04:00	0.9	3.5	3.7	24.36	7.8	9.1	89.3	7.8	0.08	0.9	0.98	33		0.8
565	BN060	BN060BR	14-Sep-10	16:32:00	0.5	2	2.2	21.86	16.76	6.9	81							
476	BN060	BN060S	17-Aug-10	12:00:00	1.2	0	3.8	26.72	16.16	8.8	105.7	8.1	0.023	0.41	0.433	11		12.5
347	BN060	BN060S	14-Sep-10	11:03:00	1	0	4.7	25.36	16.84	7.4	88.5	7.9	0.149	0.49	0.639	31		7.5
343	BN060	BN060S	08-Feb-10	10:54:00	0.8	0	3.7	4.31	6.49	11.6	97.4	7.8	0.05	2.8	2.85	31		1.5
333	BN060	BN060SR	08-Feb-10	12:04:00	0.9	0	3.7	6.37	6.5	11.5	97.4	7.5	0.06	2.3	2.36	34		1.1
566	BN060	BN060SR	14-Sep-10	16:32:00	0.5	0	2.2	12.29	17.45	7.5	84.4							
489	BN070	BN070B	17-Aug-10	12:01:00	1.8	7.3	7.5	32.14	15.36	8	96.9	8.1	0.035	0.1	0.135	8		5.8
217	BN070	BN070B	14-Sep-10	11:43:00	1.3	6.3	6.5	32.53	15.48	6.8	83.5	7.9	0.088	0.17	0.258	10	<2	3
325	BN070	BN070B	08-Feb-10	10:36:00	1.0	6	6.2	30.66	8.17	7.9	81.6	7.8	0.08	0.3	0.38	37		1
498	BN070	BN070B	23-Jun-10								8.2	0.033	<0.10	0.082999				
472	BN070	BN070BR	17-Aug-10	16:52:00	1.1	4.7	5	30.76	15.63	7.7	93.7	8.1	0.042	0.29	0.332	12</		



471	BN070	BN070SR	17-Aug-10	16:52:00	1.1	0	5	22.06	16.8	10.9	128.9	8.2	0.016	0.73	0.746	12	27.5	
71	BN070	BN070SR	14-Sep-10	16:47:00	1	0	4.7	19.92	17.18	7.6	88.9	7.8	0.15	0.85	1	28	2	9.1
228	BN080	BN080B	17-Aug-10	12:27:00	1.9	4.3	4.5	33.14	15.14	8	97.1	8.1	0.029	0.07	0.099	6	<2	5
221	BN080	BN080B	14-Sep-10	11:57:00	1.6	8.6	8.8	32.03	15.71	7	86.1	7.9	0.086	0.17	0.256	9	<2	3.5
354	BN080	BN080B	08-Feb-10	10:19:00	1.1	10	10.2	32.55	8.26	8.1	84.8	7.9	0.05	0.3	0.35	30	0.5	
178	BN080	BN080B	23-Jun-10	15:28:00	3	9.7	10	32.99	16.67	9.1	114.2	8.2	0.054	<0.10	0.103999	19	<2	
377	BN080	BN080BR	08-Feb-10	13:05:00	1.1	9	9.4	32.96	8.28	8.4	88.4	7.9	0.05	0.3	0.35	25		
568	BN080	BN080BR	14-Sep-10	17:02:00	1.2	7.5	7.8	30.64	16	6.8	82.9							
216	BN080	BN080S	14-Sep-10	11:57:00	1.6	0	8.8	31.69	15.8	7.2	87.7	7.9	0.086	0.18	0.266	10	<2	3.5
220	BN080	BN080S	17-Aug-10	12:27:00	1.9	0	4.5	29.51	16.06	8.7	105.4	8.1	0.024	0.28	0.304	9	<2	7.9
339	BN080	BN080S	08-Feb-10	10:19:00	1.1	0	10.2	14.77	6.8	10.7	96.6	7.8	0.06	1.4	1.46	33		1.1
231	BN080	BN080S	23-Jun-10	15:28:00	3	0	10	32.23	17.23	9.4	119.2	8.2	0.045	<0.10	0.094999	6	<2	
334	BN080	BN080SR	08-Feb-10	13:05:00	1.1	0	9.4	19.45	7.02	10.1	94.5	7.8	0.07	1.2	1.27	34		1.8
567	BN080	BN080SR	14-Sep-10	17:02:00	1.2	0	7.8	24.46	16.99	7.6	91.5							
258	BN090	BN090B	17-Aug-10	12:39:00	2.1	4.9	5.1	33.3	15.2	8.3	101.1	8.1	0.014	0.06	0.074	<5	<2	4.3
241	BN090	BN090B	14-Sep-10	12:13:00	1.8	9.3	9.6	34.13	14.8	6.7	82.1	8.0	0.036	0.07	0.106	5	<2	2.2
379	BN090	BN090B	08-Feb-10	09:58:00	1.25	9.9	10.2	33.24	8.3	8.6	90.6	7.9	0.03	0.2	0.23	25		0.9
270	BN090	BN090B	23-Jun-10	15:14:00	3	9.9	10.1	33.81	15.5	8.7	106.8	8.1	0.013	<0.10	0.062999	<5	<2	
240	BN090	BN090BR	14-Sep-10	16:58:00	1.5	7.9	8.2	33.25	15.25	6.7	82	8.0	0.073	0.11	0.183	5	<2	1.8
357	BN090	BN090BR	08-Feb-10	13:17:00	1.5	10.9	11.3	33.12	8.25	8.3	87.1	7.9	0.05	0.3	0.35	29		1
223	BN090	BN090S	14-Sep-10	12:13:00	1.8	0	9.6	32.33	15.65	7.2	87.8	8.0	0.064	0.16	0.224	8	<2	3.3
251	BN090	BN090S	17-Aug-10	12:39:00	2.1	0	5.1	32.87	15.43	8.3	101.7	8.1	0.014	0.61	0.624	<5	<2	4.4
147	BN090	BN090S	08-Feb-10	09:58:00	1.25	0	10.2	22.1	7.24	9.9	94.7	7.8	0.05	0.8	0.85	31	<2	0.9
550	BN090	BN090S	23-Jun-10	15:14:00	3	0	10.1	33.29	16.43	9.2	115.5	8.2	0.026	<0.10	0.075999	<5		
185	BN090	BN090SR	14-Sep-10	16:58:00	1.5	0	8.2	28.39	16.59	7.5	91.5	7.9	0.113	0.35	0.463	17	<2	5.4
352	BN090	BN090SR	08-Feb-10	13:17:00	1.5	0	11.3	23.23	7.28	9.7	94.1	7.9	0.06	0.9	0.96	30		1.1
532	BN100	BN100B	14-Sep-10	12:28:00	2.2	14.1	14.6	34.71	14.31	6.7	80.8	8.0	0.027	0.06	0.087	<5		1.5
380	BN100	BN100B	08-Feb-10	13:35:00	1.8	12.5	13	33.63	8.17	9.4	99.2	7.9	0.04	0.2	0.24	25		0.7
295	BN100	BN100B	17-Aug-10	12:58:00	3.2	11.8	12	34.59	14.31	8	96.3	8.1	0.01	<0.01	0.015	<5	<2	3
549	BN100	BN100B	23-Jun-10	14:13:00	3	17.9	18.2	34.32	13.69	7.9	94.8	8.1	0.019	<0.10	0.068999	<5		
263	BN100	BN100BR	17-Aug-10	17:14:00	2.0	10	10.3	33.55	15.06	8.1	98.8	8.1	0.021	0.05	0.071	<5	<2	5.4
497	BN100	BN100BR	14-Sep-10	17:24:00	1.2	6.4	6.6	32.84	15.42	6.9	84	8.0	0.066	0.13	0.196	7		2.7
278	BN100	BN100S	17-Aug-10	12:58:00	3.2	0	12	33.21	15.35	8.3	101.3	8.1	0.011	0.04	0.051	<5	<2	3.5
501	BN100	BN100S	14-Sep-10	12:28:00	2.2	0	14.6	33.2	15.37	7.1	87.1	8.0	0.054	0.12	0.174	6		2.9
149	BN100	BN100S	08-Feb-10	13:35:00	1.8	0	13	26.82	7.56	9.6	95.8	7.9	0.06	1	1.06	30	<2	0.7
267	BN100	BN100S	23-Jun-10	14:13:00	3	0	18.2	33.59	16.25	9.1	113.2	8.1	<0.010	<0.10	0.054999	<5	<2	
227	BN100	BN100SR	17-Aug-10	17:14:00	2.0	0	10.3	31.47	15.76	8.7	106.2	8.1	0.018	0.12	0.138	6	<2	8.2
477	BN100	BN100SR	14-Sep-10	17:24:00	1.2	0	6.6	30.9	16.18	7.4	90.4	8.0	0.078	0.21	0.288	11		3.8
529	BN110	BN110B	14-Sep-10	12:41:00	3.2	7.8	8	34.96	13.78	6.8	81.7	8.0	0.022	0.06	0.082	<5		1
393	BN110	BN110B	08-Feb-10	13:52:00	1.8	8.6	9	33.66	8.14	9.6	101.1	7.9	0.03	0.2	0.23	24		0.9
559	BN110	BN110B	17-Aug-10	13:16:00	5.0	7.8	8	34.66	14.09	8	96.4	8.1	0.016	<0.01	0.021	<5		2.8
548	BN110	BN110B	23-Jun-10	13:57:00	4.8	6.7	7	34.44	13.28	8.1	96.3	8.1	0.018	<0.10	0.067999	<5		
552	BN110	BN110S	17-Aug-10	13:16:00	5.0	0	8	34.23	14.68	8.2	100.2	8.1	<0.010	0.02	0.024999	<5		2.7
523	BN110	BN110S	14-Sep-10	12:41:00	3.2	0	8	34.09	14.85	7.1	86.4	8.0	0.03	0.08	0.11	<5		1.6
361	BN110	BN110S	08-Feb-10	13:52:00	1.8	0	9	26.84	7.29	9.8	97.2	7.9	0.05	0.7	0.75	28		1
543	BN110	BN110S	23-Jun-10	13:57:00	4.8	0	7	33.58	16.51	9.1	113.9	8.2	0.01	<0.10	0.059999	<5		
554	BN120	BN120B	17-Aug-10	13:26:00	7.0	14.9	15.2	34.69	13.87	7.4	88.5	8.1	0.021	0.01	0.031	<5		3.1
256	BN120	BN120B	14-Sep-10	13:00:00	6.4	13.8	14.5	35.04	13.43	8.4	75.9	8.0	0.012	0.06	0.072	<5	<2	0.9
470	BN120	BN120B	09-Mar-10	13:28:00	5.5	18.8	19	34.62	13.38	9.9	103.1	7.9	0.01	0.1	0.11	13		2.6
257	BN120	BN120S	14-Sep-10	13:00:00	6.4	0	14.5	34.92	14.07	6.9	83.3	8.0	0.013	0.06	0.073	<5	<2	1.1
479	BN120	BN120S	09-Mar-10	13:28:00	5.5	0	19	34.56	7.33	10	104	7.9	0.01	0.1	0.11	11		2.9
557	BN120	BN120S	17-Aug-10	13:26:00	7.0	0	15.2	34.8	14.84	8.3	101	8.1	<0.010	<0.01	0.009999	<5		2.5
546	BN120	BN120S	23-Jun-10	13:04:00	5.2	14.8	15	34.76	11.52	7.2	82.5	8.1	0.012	<0.10	0.061999	<5		
547	BN120	BN120S	23-Jun-10	13:04:00	5.2	14	15	34.17	15.37	8.7	107.4	8.1	0.012	<0.10	0.061999	<5		
293	BN130	BN130B	17-Aug-10	13:43:00	7.0	17.2	17.5	34.66	13.94	7.6	91.4	8.1	0.019	0.01	0.029	<5	<2	2.9
526	BN130	BN130B	14-Sep-10	13:13:00	6.5	16.9	17.2	35.06	13.17	6.3	74.3	8.0	0.015	0.07	0.085	<5		1
474	BN130	BN130B	23-Jun-10	13:25:00	6.5	19.7	20	34.84	11.22	7.1	81.3	8.0	0.041	<0.10	0.090999	12		
537	BN130	BN130S	14-Sep-10	13:13:00	6.5	0	17.2	34.96	14.06	7	83.9	8.0	0.011	0.05	0.061	<5		0.9
294	BN130	BN130S	17-Aug-10	13:43:00	7.0	0	17.5	34.58	14.6	8.3	101.4	8.1	<0.010	<0.01	0.009999	<5	<2	3.3
545	BN130	BN130S	23-Jun-10	13:25:00	6.5	0	20	34.14	15.5	8.7	108	8.1	0.011	<0.10	0.060999	<5	<2	
292	BN140	BN140B	17-Aug-10	13:58:00	6.8	22.9	23.1	34.7	13.88	7.4	88.9	8.1	0.017	0.01	0.027	<5		2.2
211	BN140	BN140B	23-Jun-10	13:15:00		17.2	17.8	34.62	11.46	7.2	81.9	8.0	0.046	<0.10	0.095999	11	<2	
558	BN140	BN140S	17-Aug-10	13:58:00	6.8	0	23.1	34.65	14.59	8.3	101.6	8.1	<0.010	<0.01	0.009999	<5		2.4
544	BN140	BN140S	23-Jun-10	13:15:00		0	17.8	34.38	15.03	8.6	105.7	8.1	0.01	<0.10	0.059999	<5		

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Station No	latitude	longitude	Location
BN010	51° 45' 10.532" N	8° 38' 24.153" W	Kilpadder
BN020	51° 44' 44.805" N	8° 37' 55.122" W	Knockroe
BN030	51° 44' 14.019" N	8° 38' 4.073" W	Rockhouse
BN040	51° 43' 44.183" N	8° 37' 46.983" W	Kilmacsimon (d/s Quay)
BN050	51° 43' 22.664" N	8° 36' 46.252" W	Ballydawley
BN060	51° 42' 24.325" N	8° 36' 2.760" W	Black Quay
BN070	51° 41' 43.573" N	8° 34' 48.965" W	Roughwood / Curraho
BN080	51° 42' 6.100" N	8° 33' 6.514" W	Whitecastle Creek
BN090	51° 41' 34.071" N	8° 31' 55.841" W	Kinsale Bridge
BN100	51° 42' 8.331" N	8° 30' 51.152" W	James' Fort
BN110	51° 41' 29.060" N	8° 30' 4.374" W	NE Money Point
BN120	51° 40' 25.212" N	8° 30' 29.637" W	East of Sandycove
BN130	51° 39' 59.280" N	8° 30' 40.586" W	Outer Kinsale Harbour: Courlaparleen
BN140	51° 39' 25.058" N	8° 30' 23.294" W	Outer Kinsale Harbour: E Hake Head

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<b>myear</b>	<b>Sample</b>	<b>Sub Sample</b>	<b>Cruise</b>	<b>Date (yymmdd)</b>	<b>Station</b>	<b>Shellfish Area</b>
2008	121	1	SW08	081117	Kinsale	
2009	21	1	SW09	090623	Kinsale	Kinsale
2009	4027	1	SW09	091118	Kinsale	Kinsale

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<b>WFD WB (with 1Km buffer)</b>	<b>Fixed Lat</b>	<b>Fixed Long</b>	<b>Actual Lat</b>	<b>Actual Long</b>	<b>Species (Latin)</b>	<b># in Sample</b>	<b>Purpose</b>
Lower Bandon Estuary	51.7000	-8.5450	51.7003	-8.5450	Crassostrea gigas		SH
Lower Bandon Estuary	51.7000	-8.5450			Crassostrea gigas	25	SH
Lower Bandon Estuary	51.7000	-8.5450			Crassostrea gigas	25	SH

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Temp	p H	Salinity	DO (mg/L)	DO (%sat)	TSS	Weather	Culture Type	Time High Tide	Programme	# in pool	Length (min)	Length (mean)
						F	T		SWD	1		
									SWD	25	78.0	95.8
						WR	T	1800	SWD	25	92.5	104

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					Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls
Length (max)	Length (stdev)	% Lipids	% Moisture	Tissue	CB101 (ug kg-1 WW)	CB105 (ug kg-1 WW)	CB114 (ug kg-1 WW)	CB118 (ug kg-1 WW)
		2.42	79.7	SB		<0.7		0.61
116	10.1	1.42	83.6	SB	0.15	0.05		0.21
124	7.90	2.21	86.5	SB	<0.14	<0.01		0.22

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Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls
<b>CB123 (ug kg-1 WW)</b>	<b>CB126 (ug kg-1 WW)</b>	<b>CB138 (ug kg-1 WW)</b>	<b>CB149 (ug kg-1 WW)</b>	<b>CB153 (ug kg-1 WW)</b>	<b>CB156 (ug kg-1 WW)</b>	<b>CB157 (ug kg-1 WW)</b>
		<0.7		0.63	0.04	
		0.22		0.61	0.01	
		0.13		0.46	0.009	

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Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls
CB167 (ug kg-1 WW)	CB169 (ug kg-1 WW)	CB170 (ug kg-1 WW)	CB18 (ug kg-1 WW)	CB180 (ug kg-1 WW)	CB189 (ug kg-1 WW)	CB194 (ug kg-1 WW)
				0.06		
				0.05		
		<0.004	0.04	<0.02		nd (<0.002)

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Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls
CB209 (ug kg-1 WW)	CB28 (ug kg-1 WW)	CB31 (ug kg-1 WW)	CB44 (ug kg-1 WW)	CB52 (ug kg-1 WW)	CB77 (ug kg-1 WW)
	0.22	0.3		0.47	
	<0.27			<0.15	
	0.05	nd (<0.008)	nd (<0.008)		

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Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls
CB81 (ug kg-1 WW)	SCB6 (ug kg-1 WW)	SCB6E (ug kg-1 WW)	SCB7 (ug kg-1 WW)	SCB7E (ug kg-1 WW)	SCBI (ug kg-1 WW)	SCBIE (ug kg-1 WW)
					2.69	1.99
	1.45	1.03	1.66	1.24	1.66	1.24
					1.02	0.86

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Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Chlorobiphenyls	Cyclodienes	Cyclodienes	Cyclodienes
TESCBW05E (ug kg-1 WW)	TESCBW05I (ug kg-1 WW)	TESCBW98E (ug kg-1 WW)	TESCBW98I (ug kg-1 WW)	ALD (ug kg-1 WW)	CCDAN (ug kg-1 WW)	DIELD (ug kg-1 WW)
				<0.01	0.16	0.58
					0.03	0.34
				nd (<0.003)	0.12	0.32

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Cyclodienes	Cyclodienes	Cyclodienes	Cyclodienes	Cyclodienes	Cyclodienes	Cyclodienes
<b>EDAN (WW)</b>	<b>END (ug kg-1 WW)</b>	<b>OCDAN (ug kg-1 WW)</b>	<b>SDRINM (ug kg-1 WW)</b>	<b>SDRINME (ug kg-1 WW)</b>	<b>TCDAN (ug kg-1 WW)</b>	<b>TNONC (ug kg-1 WW)</b>
0.44	<0.02	<0.09	0.61	0.58	<0.1	0.09
	nd (<0.001)	0.01	0.34	0.34	0.05	0.08
	nd (<0.003)	nd (<0.003)	0.33	0.32	0.12	0.04

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Dichloro-diphenyl-trichloroethane (DDTs)	Dichloro-diphenyl-trichloroethane (DDTs)	Dichloro-diphenyl-trichloroethane (DDTs)	Dichloro-diphenyl-trichloroethane (DDTs)	Dichloro-diphenyl-trichloroethane (DDTs)	Dichloro-diphenyl-trichloroethane (DDTs)
DDEOP (ug kg-1 WW)	DDEPP (ug kg-1 WW)	DDTOP (ug kg-1 WW)	DDTPP (ug kg-1 WW)	SDDT (ug kg-1 WW)	SDDTE (ug kg-1 WW)
	0.7		0.01		
	0.3	0.12	nd (<0.001)		
nd (<0.003)	0.72	<0.09	nd (<0.003)	0.9	0.8

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Dichloro-diphenyl-trichloroethane (DDTs)	Dichloro-diphenyl-trichloroethane (DDTs)	Dichloro-diphenyl-trichloroethane (DDTs)	Dichloro-diphenyl-trichloroethane (DDTs)	Dioxins	Dioxins	Dioxins
SDDTM (ug kg-1 WW)	SDDTME (ug kg-1 WW)	TDEOP (ug kg-1 WW)	TDEPP (ug kg-1 WW)	CDD1N (pg kg-1 WW)	CDD4X (pg kg-1 WW)	CDD6P (pg kg-1 WW)
1.01	1.01		0.3			
0.74	0.42	nd (<0.001)	<0.32			
0.9	0.8	nd (<0.003)	0.08			

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Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Dioxins
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)

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Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Dioxins
CDF9P (pg kg-1 WW)	CDF9X (pg kg-1 WW)	CDFDX (pg kg-1 WW)	CDFO (pg kg-1 WW)	CDFP2 (pg kg-1 WW)	TCDD (pg kg-1 WW)	TESCBCDFW05E (ng kg-1 WW)

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Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Dioxins	Dioxins
TESCBCDCFW05I (ng kg-1 WW)	TESCBCDCFW98E (ng kg-1 WW)	TESCBCDCFW98I (ng kg-1 WW)	TESCDCF05E (pg kg-1 WW)	TESCDCF05I (pg kg-1 WW)	TESCDCF98E (pg kg-1 WW)	TESCDCF98I (pg kg-1 WW)

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Hexachlorocyclohexanes	Hexachlorocyclohexanes	Hexachlorocyclohexanes	Metals and metalloids	Metals and metalloids	Metals and metalloids
HCHA (ug kg-1 WW)	HCHB (ug kg-1 WW)	HCHG (ug kg-1 WW)	AG (mg kg-1 WW)	AS (mg kg-1 WW)	CD (mg kg-1 WW)
0.06		<0.1	0.25	2.6	0.13
0.02	0.07	nd (<0.001)	0.44	1.57	0.15
0.02	nd (<0.003)	0.07	0.36	2.5	0.18

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Metals and metalloids	Metals and metalloids	Metals and metalloids	Metals and metalloids	Metals and metalloids	Metals and metalloids	Organobromines
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)
0.15	15.3	<0.02	<0.13	0.27	211	
0.14	15.9	0.02	<0.13		249	
0.12	17.4	<0.02	<0.13	0.17	289	

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Organobromines	Organobromines	Organobromines	Organobromines	Organobromines	Organobromines	Organobromines
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)

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Organobromines	Organobromines	Organobromines	Organobromines	Organobromines	Organobromines	Organobromines
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)

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Organobromines	Organobromines	Organobromines	Organobromines	Organobromines	Organobromines	Organobromines
BDE17 (ug kg-1 WW)	BDE28 (ug kg-1 WW)	BDE47 (ug kg-1 WW)	BDE49 (ug kg-1 WW)	BDE66 (ug kg-1 WW)	BDE71 (ug kg-1 WW)	BDE77 (ug kg-1 WW)

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Organobromines	Organobromines	Organobromines	Organobromines	Organobromines	Organobromines	Organobromines
BDE85 (ug kg-1 WW)	BDE99 (ug kg-1 WW)	HBCD (ug kg-1 WW)	HPBDE (ug kg-1 WW)	HXBDE (ug kg-1 WW)	NBDE (ug kg-1 WW)	OBDE (ug kg-1 WW)

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Organobromines	Organobromines	Organobromines	Organobromines	Organobromines	Organochlorines (general)	Organochlorines (general)
PEBDE (ug kg-1 WW)	SBDE (ug kg-1 WW)	SBDEE (ug kg-1 WW)	TEBDE (ug kg-1 WW)	TRBDE (ug kg-1 WW)	ENDA (ug kg-1 WW)	ENDB (ug kg-1 WW)
					nd (<0.02)	<0.01
					nd (<0.001)	0.01
						nd (<0.003)

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Organochlorines (general)	Organochlorines (general)	Organochlorines (general)	Organochlorines (general)	Organofluorines	Organofluorines	Organofluorines
HCB (ug kg-1 WW)	HCEPT (ug kg-1 WW)	HCEPX (ug kg-1 WW)	HEPC (ug kg-1 WW)	PFDOA (ug kg-1 WW)	PFDS (ug kg-1 WW)	PFOA (ug kg-1 WW)
0.01		<0.01	<0.12			
0.07	nd (<0.001)					
0.01	0.02		0.04			

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Organofluorines	Organofluorines	Organofluorines	Organofluorines	Organofluorines	Pesticides (general)
PFOS (ug kg-1 WW)	SPFCE (ug kg-1 WW)	SPFCI (ug kg-1 WW)	SPFOSOAE (ug kg-1 WW)	SPFOSOAI (ug kg-1 WW)	ENDS (ug kg-1 WW)
					0.03
					0.02
					nd (<0.003)

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Year	Sample	Date	Time	Station
04	1082	20/10/04	14:55	Kinsale Harbour
09	1024	01/12/09	15:40	Kinsale

Designated Shellfish Water Area  
(with 1Km buffer)  
Kinsale  
Kinsale

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Water Framework Directive Area (with 1Km buffer)	Latitude	Longitude	Water Depth	Probe temp	Probe pH	Probe salinity	Probe DO (mg/L)	Probe DO (%) Sat
Lower Bandon Estuary	51.6920	-8.5247	2	11.00	7.97	26.60	10.10	94.60
Lower Bandon Estuary	51.7000	-8.5450		9.14	8.16	24.92	9.11	92.90

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Suspend Solids (mg/L)	Sample Depth (m)	Phosphate (uM)	Silicate (uM)	Nitrite (uM)	TOxN (uM)	Salinity	Silver (ug/L)	Aldrin (ug/L)	Arsenic (ug/L)
7							<1.00	<0.01	1.07
32.7									

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CB101	CB138	CB118	CB153	CB180	CB28	CB52	Cadmium	Chromium	Copper	DDEOP	DDEPP	DDTOP	DDTPP
(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.04	0.81	1.05	<0.01	<0.01	<0.01	<0.01

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Dieldrin	Endrin	HCB	HCHA	HCHB	HCHG	Mercury	Isocrin	Nickel	Lead	TDEOP	TDEPP	Zinc
(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.008	<0.01	3.43	0.25	<0.01	<0.01	18.10

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Year	Sample	Date	Time	Station
09	1024	091201	1540	Kinsale
10	1120	100221	1915	Kinsale
10	1321	100514	1631	Kinsale
10	1521	100824	1029	Kinsale
09	1028			Cork Harbour - Rostellan South

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Water Framework Directive Area (with 1Km buffer)	actual_lat_decimal	actual_lon_decimal	Probe_Temp	Probe_pH
Lower Bandon Estuary	51.7000	-8.5450	9.14	8.16
Lower Bandon Estuary	51.7002	-8.5445	6.40	
Lower Bandon Estuary	51.7003	-8.5448	12.20	8.20
Lower Bandon Estuary	51.7003	-8.5450	16.10	8.30

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Probe_Salinity	Probe_DO_mgL	Probe_DO_%_Sat	Suspended_Solids_mgL	True_Colour
24.9	9.11	93	32.7	<4
22.0	10.10	100	6.00	<4
32.0	9.70	109	11	4.7
33.0	9.80	123	39	9.3
			58.4	<4

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Year	Sample	Date	Time	Station	Latitude	Longitude	Temp	pH	Salinity	DO (mg/L)	DO (% sat)	Colour	Suspended Solids (mg/l)
10	1052	21/01/10	16:50	Kinsale	51.7000	-8.5450	8.8		7	10.7	98		
10	1120	21/02/10	19:15	Kinsale	51.7002	-8.5445	6.4	8.5	22	10.1	100	<4	6
10	1187	31/03/10	16:45	Kinsale	51.7005	-8.5448	8.5		21	10.1	100		
10	1254	21/04/10	11:55	Kinsale	51.7005	-8.5448	10.9	8.4	30	11.5	126		
10	1321	14/05/10	16:31	Kinsale	51.7003	-8.5448	12.2	8.2	32	9.7	109	4.7	11
10	1357	30/06/10	17:23	Kinsale	51.7003	-8.5433	20.0	8.5	29	9.8	128		
10	1450	13/07/10	12:15	Kinsale	51.7000	-8.5450	15.6	7.6	20	8.9	102		
10	1523	24/08/10	10:29	Kinsale	51.7003	-8.5450	16.1	8.3	33	9.8	123	<4	297
10	1591	24/09/10	11:57	Kinsale	51.7000	-8.5452	15.7	7.8	28	9.2	110		
10	1661	29/10/10	13:05	Kinsale	51.7000	-8.5450	12.4	7.9	29	8.3	93		

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System Procedure  
 Monthly Status Report  
 October 2013

Issue Code:	PMS
Date of Issue:	18/11/2013
Originator:	B Farkas
Authorised by:	B O Toole



Kinsale Waste Water Treatment Plant  
 Operational Report  
 For  
 October, 2013

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DATE	DESCRIPTION	REV. No.	APPROVED BY	ISSUED BY
13/11/2013	Initial Issue	0		V Browne



**System Procedure  
Monthly Status Report  
October 2013**

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Date of Issue:	18/11/2013
Originator:	B Farkas
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## 1. Introduction

This report covers the period of October 2013 for the operation of Kinsale Waste Water Treatment Plant by EPS on behalf of Cork County Council.

EPS has operated Kinsale WWTP since November 2010

There have been thirty-second monthly reports submitted to Cork County Council since the commencement of operations by EPS.

The format of this report conforms to the requirements of the PMS for WWTP.

## 2. Executive Summary

### Influent:

	<b>COD</b>	<b>BOD</b>
Influent Monthly Average (mg/l)	276	131
Average Daily Load (kg)	993	473.2
% of Design Load	66.2	63.1

Total Influent Flow = 111632m<sup>3</sup>, Average Daily Flow = 3601m<sup>3</sup>, Peak Flow = 7201m<sup>3</sup>

Average Influent Salinity = 6123mg/l

Peak Influent Salinity = 8000mg/l

### Effluent:

The effluent quality was again very good during October and all results were within the discharge limits.

### Other Issues:

Five skip loads of dewatered sludge were transported off site in October.

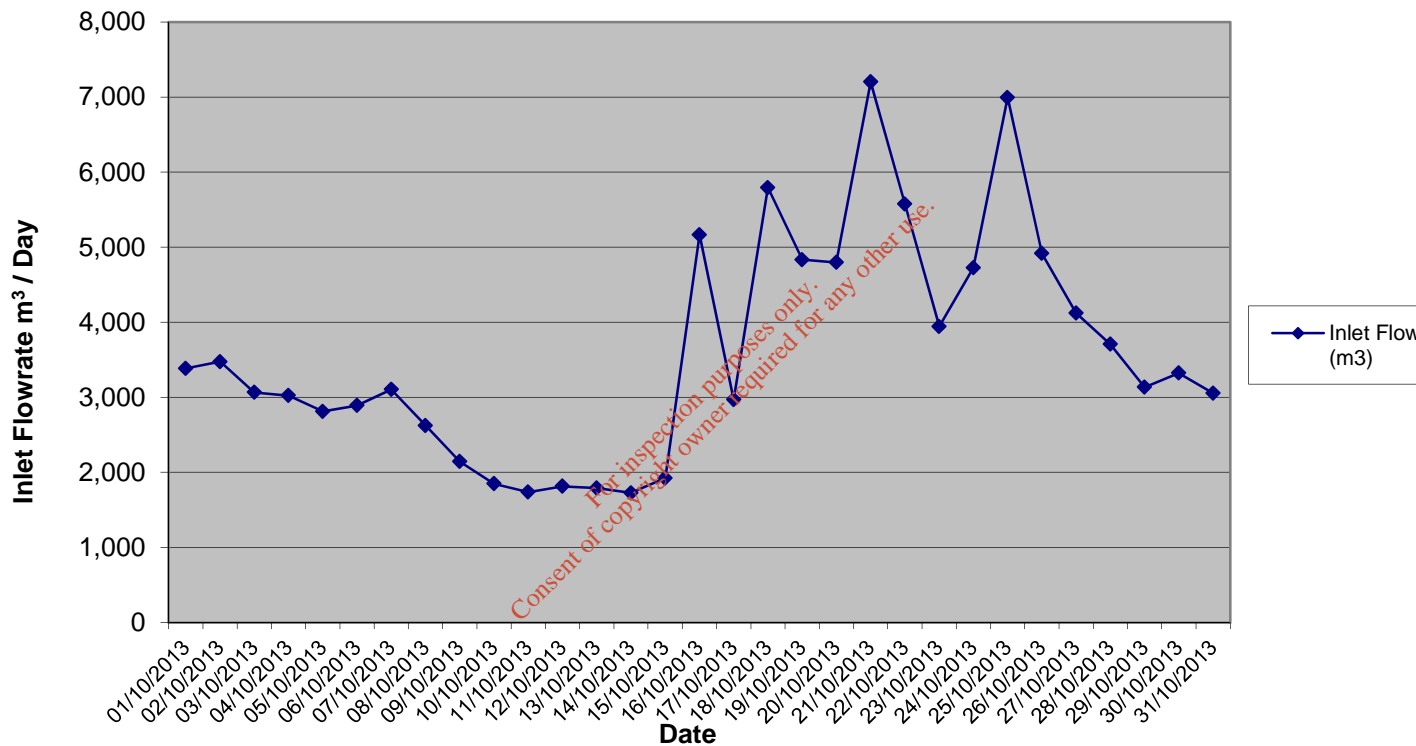
### 3. Graphical Presentation of Data

ARP4/1

Table of total daily inlet flows for October 2013	
Date (Midnight to Midnight)	Inlet Flow (m <sup>3</sup> )
01/10/2013	3,385
02/10/2013	3,474
03/10/2013	3,067
04/10/2013	3,025
05/10/2013	2,813
06/10/2013	2,891
07/10/2013	3,106
08/10/2013	2,624
09/10/2013	2,144
10/10/2013	1,849
11/10/2013	1,738
12/10/2013	1,816
13/10/2013	1,791
14/10/2013	1,728
15/10/2013	1,924
16/10/2013	5,167
17/10/2013	2,969
18/10/2013	5,793
19/10/2013	4,834
20/10/2013	4,796
21/10/2013	7,201
22/10/2013	5,574
23/10/2013	3,944
24/10/2013	4,724
25/10/2013	6,994
26/10/2013	4,916
27/10/2013	4,124
28/10/2013	3,708
29/10/2013	3,134
30/10/2013	3,324
31/10/2013	3,055



Graph of Total Daily Inlet Flows for October 2013  
ARP4/2



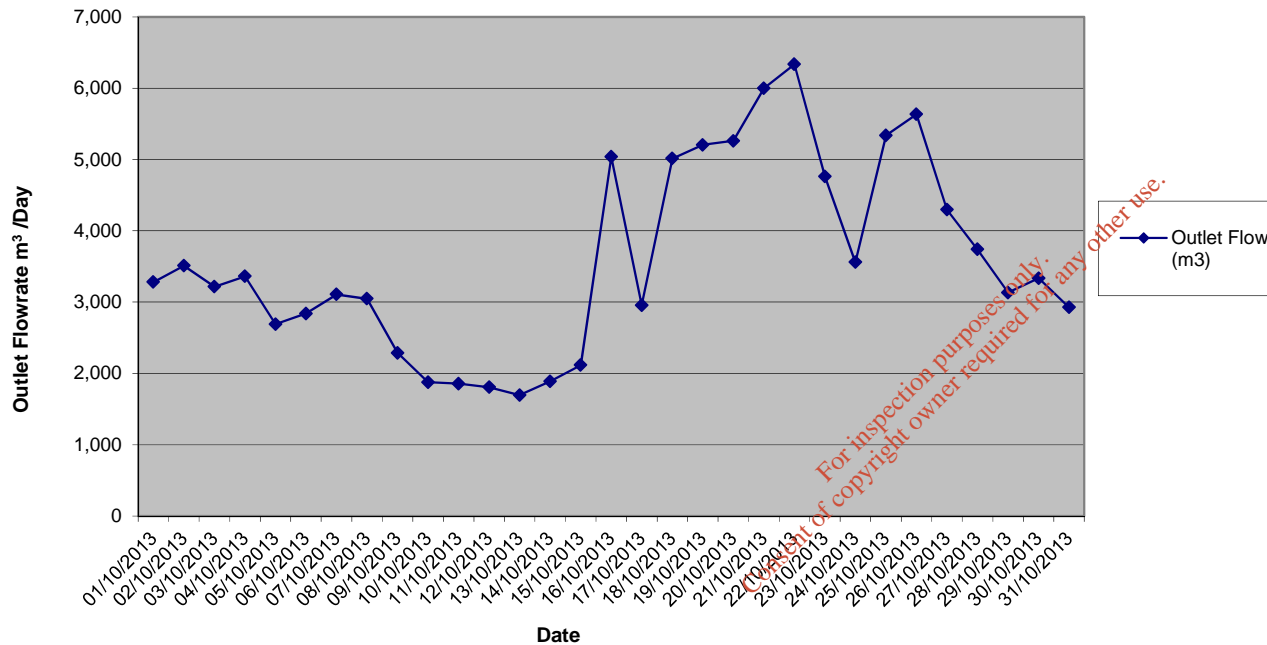
ARP4/3

**Table of total daily outlet flows for October 2013**

Date (Midnight to Midnight)	Outlet Flow (m <sup>3</sup> )
01/10/2013	3,281
02/10/2013	3,510
03/10/2013	3,217
04/10/2013	3,362
05/10/2013	2,690
06/10/2013	2,840
07/10/2013	3,107
08/10/2013	3,048
09/10/2013	2,287
10/10/2013	1,876
11/10/2013	1,856
12/10/2013	1,805
13/10/2013	1,695
14/10/2013	1,889
15/10/2013	2,116
16/10/2013	5,038
17/10/2013	2,957
18/10/2013	5,014
19/10/2013	5,204
20/10/2013	5,261
21/10/2013	5,998
22/10/2013	6,336
23/10/2013	4,761
24/10/2013	3,558
25/10/2013	5,337
26/10/2013	5,635
27/10/2013	4,297
28/10/2013	3,741
29/10/2013	3,134
30/10/2013	3,336
31/10/2013	2,926

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Graph of Total Daily Outlet Flows for October 2013  
ARP4/4

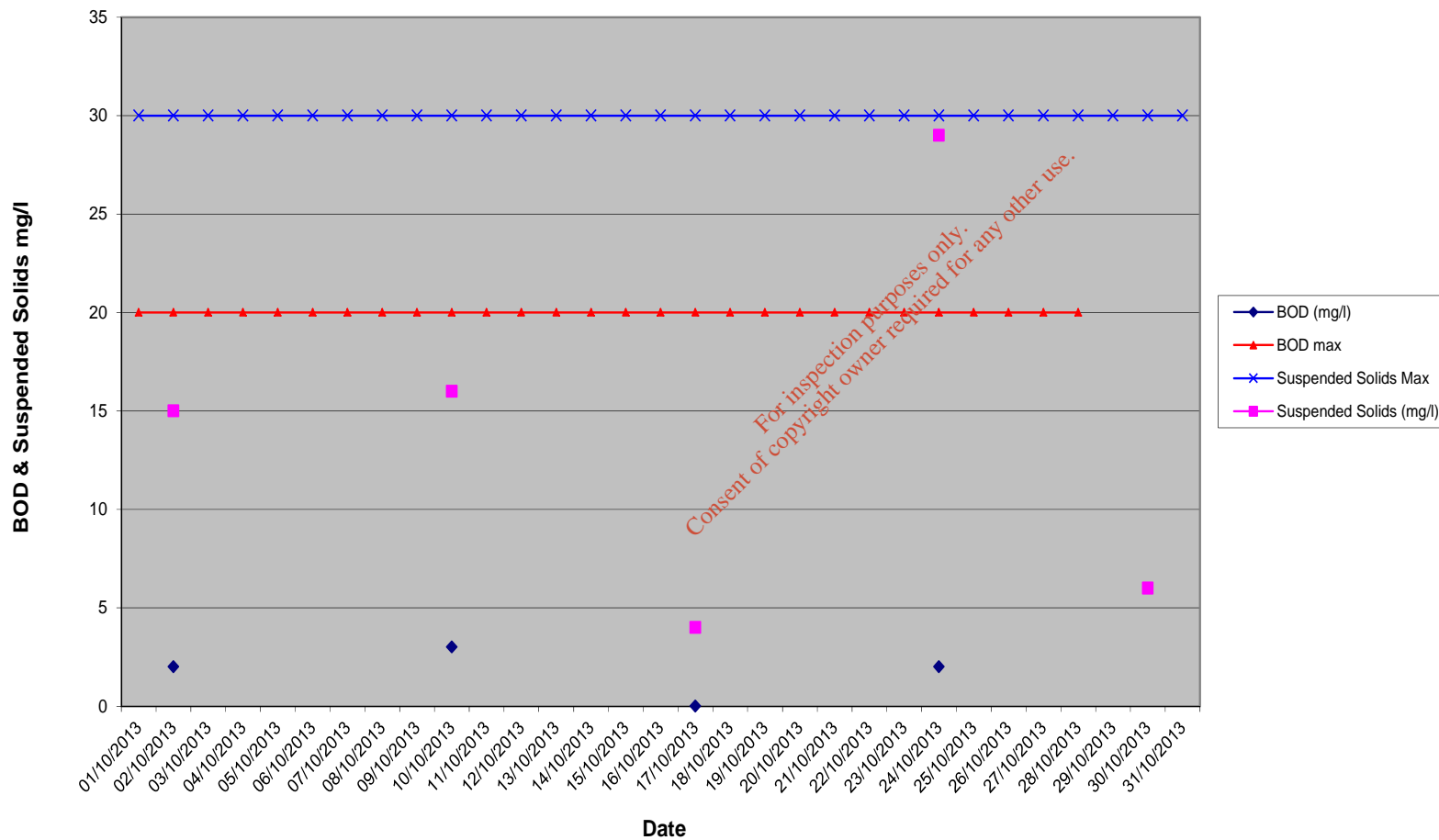


ARP 4/5

Table of BOD & Suspended Solids of Final Effluent for October 2013		
Date	BOD (mg/l)	Suspended Solids (mg/l)
<b>Limit</b>	<b>20</b>	<b>30</b>
1-Oct-13		
2-Oct-13	2	15
3-Oct-13		
4-Oct-13		
5-Oct-13		
6-Oct-13		
7-Oct-13		
8-Oct-13		
9-Oct-13		
10-Oct-13	3	16
11-Oct-13		
12-Oct-13		
13-Oct-13		
14-Oct-13		
15-Oct-13		
16-Oct-13		
17-Oct-13	<2	4
18-Oct-13		
19-Oct-13		
20-Oct-13		
21-Oct-13		
22-Oct-13		
23-Oct-13		
24-Oct-13	2	29
25-Oct-13		
26-Oct-13		
27-Oct-13		
28-Oct-13		
29-Oct-13		
30-Oct-13		6
31-Oct-13	2	

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Graph of BOD & Suspended Solids of Final Effluent for October 2013  
ARP4/6

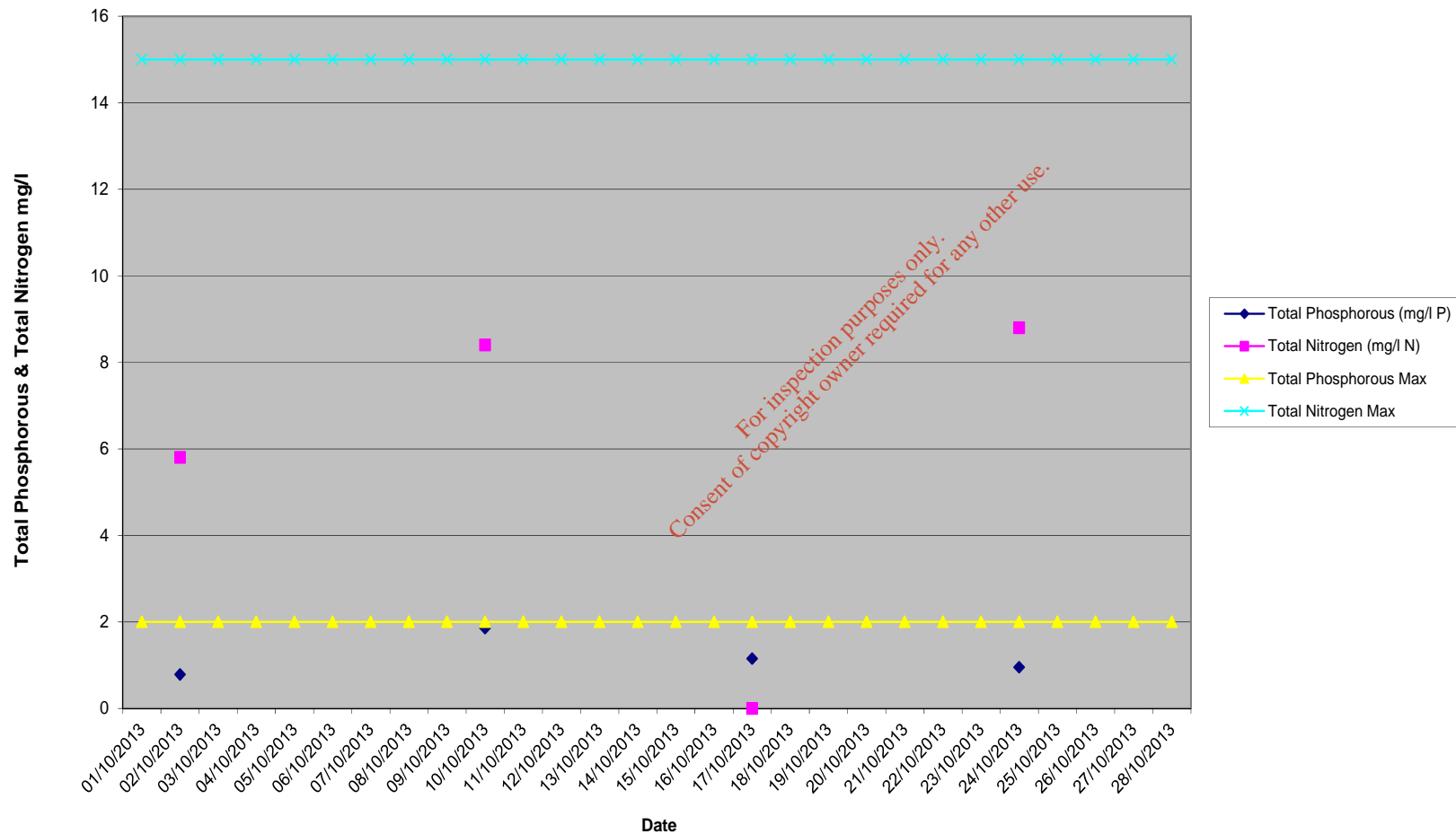


ARP 4/7

Table of total phosphorous & total nitrogen of Final Effluent for October 2013		
Date	Total Phosphorous (mg/l P)	Total Nitrogen (mg/l N)
<b>Limit</b>	<b>2</b>	<b>15</b>
01/10/2013		
02/10/2013	0.78	5.8
03/10/2013		
04/10/2013		
05/10/2013		
06/10/2013		
07/10/2013		
08/10/2013		
09/10/2013		
10/10/2013	1.85	8.4
11/10/2013		
12/10/2013		
13/10/2013		
14/10/2013		
15/10/2013		
16/10/2013		
17/10/2013	1.15	<10
18/10/2013		
19/10/2013		
20/10/2013		
21/10/2013		
22/10/2013		
23/10/2013		
24/10/2013	0.95	8.8
25/10/2013		
26/10/2013		
27/10/2013		
28/10/2013		
29/10/2013		
30/10/2013	0.58	9.1
31/10/2013		

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Total Phosphorous & Total Nitrogen of Final Effluent for October 2013  
ARP4/8





System Procedure  
Monthly Status Report  
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Authorised by:	B O Toole

#### 4. Comments on Analysis Results

The effluent quality was again very good during October and all results were within the discharge limits.

The influent salinity is still fluctuating with the tidal conditions. All influent samples tested were well above the 400 mg/l salinity specification. The peak salinity figure for the month was 8000 mg/l.

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ARP7/3

**No Accidents occurred during this period**

**Health & Safety Statistics Report**

Plant Manager Vincent Browne Date 13 November 2013  
 For Period Oct-13  
 Site Involved Kinsale WWTP

Category 1: Covers Fatalities and major Injuries  
 Category 2: Covers lost time accident resulting in more than 3 days absence  
 Category 3: Covers lost time accidents resulting in 3 days absence or less  
 Major Incident: Accident not covered by categories 1 to 3

Direct Employees					
Number of Employees:	3			Exposure Hours:	120
	Category 1	Category 2	Category 3	Major Incident	Near Miss
Number of Accidents	0	0	0	0	0
Days lost					

Direct Employees					
Number of Employees:				Exposure Hours:	
Subcontractors on Site					
	Category 1	Category 2	Category 3	Major Incident	Near Miss
Number of Accidents					
Days lost					

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## 8. Complaints Register

ARP9

**No complaints were received during this reporting period**

Complaints Register		
Date of Complaint	None	Complainant's Address:
Complaint's Name		
Nature of Complaint		
Acknowledgement of Complaint	Author of Acknowledgement	Date Sent
Cause of Complaint		
Action taken to Resolve cause of Complaint:		
Final Outcome Report	Author of Final Outcome Report	Date Forwarded to Local Authority

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## 10. Analysis Results for the EPA

ARP11

Analysis Results for EPA	
Sample No:	None
Sample Date:	
Parameter	Concentration (mg/l)
BOD	
COD	
SS	
TN	
TP	

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## 12. Weather Records

ARP13

Weather Record		
Date	Day	Rainfall (mm)
01/10/2013	Tue	16.8
02/10/2013	Wed	8.8
03/10/2013	Thu	9.9
04/10/2013	Fri	1.9
05/10/2013	Sat	0.1
06/10/2013	Sun	2.1
07/10/2013	Mon	2.8
08/10/2013	Tue	0.5
09/10/2013	Wed	0.1
10/10/2013	Thu	0
11/10/2013	Fri	0
12/10/2013	Sat	0
13/10/2013	Sun	0
14/10/2013	Mon	0
15/10/2013	Tue	2.1
16/10/2013	Wed	22.2
17/10/2013	Thu	3.6
18/10/2013	Fri	18.5
19/10/2013	Sat	2.2
20/10/2013	Sun	7.5
21/10/2013	Mon	16.1
22/10/2013	Tue	6.7
23/10/2013	Wed	0.1
24/10/2013	Thu	29.7
25/10/2013	Fri	5.4
26/10/2013	Sat	8.0
27/10/2013	Sun	5.7
28/10/2013	Mon	3.4
29/10/2013	Tue	0.0
30/10/2013	Wed	5.4
31/10/2013	Thu	3.4

**Note: Rainfall data is taken from Met-Eireann weather station at Cork Airport**

### 13. Odour Equipment Maintenance Records

ARP14

**No major maintenance jobs were carried out this month on the odour systems**

Odour Equipment Maintenance Records							
Date	Zone	Location	Type of Media	No. of Units Changed	Date Media Last Changed	Date Media Due Next Change	Quantity of Media in Stock
None							

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## 14. Storm Tank Records

ARP15

Storm Tank Record		
Date	Flow to Storm Tank (M <sup>3</sup> )	Storm Overflow to Outfall (M <sup>3</sup> )
01/10/2013	221	0
02/10/2013	100	0
03/10/2013	4	0
04/10/2013	0	0
05/10/2013	0	0
06/10/2013	1	0
07/10/2013	106	0
08/10/2013	2	0
09/10/2013	0	0
10/10/2013	0	0
11/10/2013	0	0
12/10/2013	0	0
13/10/2013	0	0
14/10/2013	0	0
15/10/2013	0	0
16/10/2013	1,002	0
17/10/2013	0	0
18/10/2013	1,241	0
19/10/2013	651	0
20/10/2013	437	0
21/10/2013	1,353	0
22/10/2013	847	0
23/10/2013	28	0
24/10/2013	572	0
25/10/2013	1,078	0
26/10/2013	273	0
27/10/2013	0	0
28/10/2013	0	0
29/10/2013	0	0
30/10/2013	6	0
31/10/2013	0	0



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Authorised by:	B O Toole

### 15. Equipment Calibration Records

ARP16

Equipment Calibration Record						
Date	Equipment Description	Serial No.	Calibrated By (Name & Company)	Next Calib. Due	Calib. Cert Recd.	Comment
14/10/2013	Dissolved Oxygen Probes		K Murphy (EPS)	Nov '13		Internal Calibration

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System Procedure  
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Authorised by:	B O Toole

## 19. Analysis Results for Raw Influent, Settled Sewage & Mixed Liquor

ARP20

Date	Analysis Results for Raw Influent & Mixed Liquor																		
	Raw Influent							SBR 1 Mixed Liquor			SBR 2 Mixed Liquor			SBR 3 Mixed Liquor			SBR 4 Mixed Liquor		
BOD mg/l O <sub>2</sub>	COD mg/l O <sub>2</sub>	SS mg/l	TP mg/l P	TN mg/l N	Salinity (mg/l)	pH	SSV ml	SS mg/l	SVI ml/g	SSV ml	SS mg/l	SVI ml/g	SSV ml	SS mg/l	SVI ml/g	SSV ml	SS mg/l	SVI ml/g	
01/10/2013		156																	
02/10/2013	135	154	181	3.8	23	7680	6.85												
03/10/2013		154																	
04/10/2013		154																	
05/10/2013		155																	
06/10/2013		159																	
07/10/2013		158						280	1948	143.7	630	3240	194.44	350	2064	169.57	410	2412	169.98
08/10/2013		212									600	3004	199.73						
09/10/2013		341																	
10/10/2013	182	324	235	4	33.5	8000	6.59	350	2312	151.38	580	2560	226.56	380	2508	151.52	600	2248	266.9
11/10/2013		194																	
12/10/2013		192																	
13/10/2013		200																	
14/10/2013		204						500	2380	210.08	590	2092	282.03	370	2252	164.3	610	2176	280.33
15/10/2013		236																	
16/10/2013		252	81	2	36	6820	6.46												
17/10/2013	83	215	92	2.43	<10	5370													
18/10/2013		214						320	2260	141.59	380	2388	159.13	180	1620	111.11	320	1904	168.07
19/10/2013		268																	
20/10/2013		389																	
21/10/2013		381																	
22/10/2013		365						350	2080	168.27	250	1864	134.12	400	2492	160.51	330	1836	180
23/10/2013		360																	
24/10/2013	112	375	286	6.75	3.5	6920	7.64												
25/10/2013		376																	
26/10/2013		356																	
27/10/2013		384																	
28/10/2013		394																	
29/10/2013		398						740	2504	295.53	300	1636	183	340	1844	184.38	740	2308	320.62
30/10/2013		417	158	3.4	20.4	1950	7.01												
31/10/2013	145	416																	



## 21. Analysis Results for Final Effluent

ARP22

Analysis Results for Final Effluent								
Date	BOD (mg/l O <sub>2</sub> )	COD (mg/l O <sub>2</sub> )	SS (mg/l)	Total P (mg/l P)	Total N (mg/l N)	NH <sub>3</sub> (mg/l)	Faecal Coliform (No./100mls)	Flow Per Day (M <sup>3</sup> )
<b>Limit</b>	<b>20</b>	<b>125</b>	<b>30</b>	<b>2</b>	<b>15</b>	<b>NA</b>		
01/10/2013		90.8						3281
02/10/2013	2	90.8	15	0.78	5.8	5.3	72	3510
03/10/2013		201.57					31	3217
04/10/2013		229.2						3362
05/10/2013		229.19						2690
06/10/2013		229.21						2840
07/10/2013		229.21						3107
08/10/2013		164.48						3048
09/10/2013		44.63					27	2287
10/10/2013	3	44.64	16	1.85	8.4	6.6	42	1876
11/10/2013		44.66						1856
12/10/2013		44.66						1805
13/10/2013		44.67						1695
14/10/2013		44.66						1889
15/10/2013		44.66						2116
16/10/2013		44.65						5038
17/10/2013	<2	44.65	4	1.15	<10	6.41	26	2957
18/10/2013		44.66						5014
19/10/2013		44.65						5204
20/10/2013		44.65						5261
21/10/2013		44.65						5998
22/10/2013		44.6						6336
23/10/2013		44.64					75	4761
24/10/2013	2	44.64	29	0.95	8.8	4.5	62	3558
25/10/2013		44.65						5337
26/10/2013		44.65						5635
27/10/2013		44.65						4297
28/10/2013		44.65						3741
29/10/2013		44.66						3134
30/10/2013		44.66	6	0.58	9.1	6.2	52	3336
31/10/2013	2	44.66					17	2926







## 23. Analysis Results for Microscopic Analysis

ARP24

**No Microscopic Analysis was carried out during this period**

Analysis Results for Microscopic Examination	
<b>Sample Date: None</b>	
<b>Sample Ref No:</b>	
Activated Sludge Characteristics	Comments
Flock Shape: (Round, Irregular, Cylindrical)	
Floc Size	
Floc Form & Strength: (Open, Closed, Weak, Strong)	
Colonies:	
Dispersed Bacteria:	
Filamentous Bacteria (on a scale 1-6, None to excessive):	
Effect of Filaments (Bridged, Attached material, Distrupting Floc):	
Fungi:	
Protozoa:	<b>Ciliates:</b>
	<b>Flagella:</b>
	<b>Amoeboid:</b>
Higher Organisms:	<b>Rotifers:</b>
	<b>Nematodes:</b>

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## 24. Analysis Results of Random Sampling by Employer

### ARP25

Results of Random Analysis By Employer			
Sample Date	None		
	Sample No:		Split Sample No:
Parameter	Sample Concentration (mg/l)		Split Sample Concentration (mg/l)
BOD			
COD			
SS			
TN			
TP			

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## 25. Facility Maintenance Records

ARP26

Facility Maintenance Record			
A = Excellent B = Acceptable C = Unacceptable			
Completed On Site	A	B	C
<b>1. Lawn Maintenance</b>			
A. Grass cut & collected	A		
B. Edging tidy	A		
<b>2. Shrub Maintenance</b>			
A. Bushes pruned	A		
B. Trees erect & staked where required	A		
C. Hedges cut	A		
<b>3. Hard Surfaces</b>			
A. All surfaces swept	A		
B. All surfaces free of algae, moss etc.	A		
C. Road Surfaces clean & adequate	A		
D. All roofs free of algae, moss	A		
<b>4. Exterior Painting</b>			
A. All buildings painted & clean	A		
b. All gates & doors painted	A		
<b>5. Housekeeping</b>			
A. Litter removed from site	A		
B. Surface area around bins & skips clean	A		
C. Site free from spillages		B	
<b>6. Buildings</b>			
A. Roof in waterproof condition	A		
B. Glazing in good order	A		
<b>7. Interior Painting</b>			
A. All rooms painted & clean	A		
<b>8. Welfare &amp; Sanitation</b>			
A. Toilet/washing facilities clean		B	
B. Canteen clean		B	



System Procedure  
Monthly Status Report  
October 2013

Issue Code:	PMS
Date of Issue:	18/11/2013
Originator:	B Farkas
Authorised by:	B O Toole

## 26. Emergency Event Records

**There were no emergency events during this reporting period**

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System Procedure  
Monthly Status Report  
October 2013

Issue Code:	PMS
Date of Issue:	18/11/2013
Originator:	B Farkas
Authorised by:	B O Toole

**Appendix 1 – External Laboratory Reports**

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Fax:(01) 613 6008  
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[www.cityanalysts.ie](http://www.cityanalysts.ie)

### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-02986-EPS  
Report Version: 1  
Date Received: 10/10/2013



Page 2 of 3

Sample Description: KINSALE WWTP INFLUENT  
Sample Type: Waste water  
Date Sampled: 10/10/2013  
Lab Reference Number: 163121

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	10/10/2013	CBOD5	16	mg/l O2	-	INAB

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Note:

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.

Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC - Analysed at a subcontracted lab

Template 1146  
Revision 016



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### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-02006-EPS  
Report Version: 1  
Date Received: 10/10/2013



Page 3 of 3

Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 10/10/2013  
Lab Reference Number: 163122

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	10/10/2013	CBOD5		mg/l O2	-	INAB

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Note:

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### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03118-EPS  
Report Version: 1  
Date Received: 24/10/2013



Page 2 of 3

Sample Description: KINSALE WWTP INFLUENT  
Sample Type: Waste water  
Date Sampled: 24/10/2013  
Lab Reference Number: 164043

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	24/10/2013	CBOD5	12	mg/l O2	-	INAB

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Note:

NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.  
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Report Reference: 13-03118-EPS  
Report Version: 1  
Date Received: 24/10/2013



Page 3 of 3

Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 24/10/2013  
Lab Reference Number: 164044

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	24/10/2013	CBOD5		mg/l O2	-	INAB

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Note:

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TVC - Total Viable Count

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### Certificate of Analysis

**Customer Contact:** Vincent Browne  
**Customer:** EPS Operations Division  
**Customer Address:** Mallow  
Co Cork

**Report Reference:** 13-02864-EPS  
**Report Version:** 1  
**Date Received:** 03/10/2013



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**Sample Description:** KINSALE WWTP FINAL EFFLUENT  
**Sample Type:** Effluent  
**Date Sampled:** 02/10/2013  
**Lab Reference Number:** 162619

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	03/10/2013	Faecal Coliforms	2	ctu/100ml	-	INAB

**Note:**

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.

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**Customer Contact:** Vincent Browne  
**Customer:** EPS Operations Division  
**Customer Address:** Mallow  
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**Report Reference:** 13-02864-EPS  
**Report Version:** 1  
**Date Received:** 03/10/2013



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**Sample Description:** KINSALE WWTP FINAL EFFLUENT  
**Sample Type:** Effluent  
**Date Sampled:** 03/10/2013  
**Lab Reference Number:** 162620

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	03/10/2013	Faecal Coliforms	321	ctu/100ml	-	INAB

**Note:**

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007, S.I. No. 278 of 2007, and relates only to drinking water samples.

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**Customer Contact:** Vincent Browne  
**Customer:** EPS Operations Division  
**Customer Address:** Mallow  
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**Report Reference:** 13-02979-EPS  
**Report Version:** 1  
**Date Received:** 10/10/2013



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**Sample Description:** KINSALE WWTP FINAL EFFLUENT  
**Sample Type:** Effluent  
**Date Sampled:** 09/10/2013  
**Lab Reference Number:** 163148

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	10/10/2013	Faecal Coliforms	23	ctu/100ml	-	INAB

**Note:**

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007, S.I. No. 278 of 2007, and relates only to drinking water samples.

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**Customer:** EPS Operations Division  
**Customer Address:** Mallow  
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**Report Reference:** 13-02979-EPS  
**Report Version:** 1  
**Date Received:** 10/10/2013



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**Sample Description:** KINSALE WWTP FINAL EFFLUENT  
**Sample Type:** Effluent  
**Date Sampled:** 10/10/2013  
**Lab Reference Number:** 163149

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	10/10/2013	Faecal Coliforms	45	cfu/100ml	-	INAB

**Note:**

NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007, S.I. No. 278 of 2007, and relates only to drinking water samples.

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Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03074-EPS  
Report Version: 1  
Date Received: 17/10/2013



Page 2 of 3

Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 16/10/2013  
Lab Reference Number: 163683

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	17/10/2013	Faecal Coliforms	121	cfu/100ml	-	INAB

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Note:

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TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.  
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Customer Address: Mallow  
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Report Reference: 13-03074-EPS  
Report Version: 1  
Date Received: 17/10/2013



Page 3 of 3

Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 17/10/2013  
Lab Reference Number: 163684

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	17/10/2013	Faecal Coliforms	25	cfu/100ml	-	INAB

Note:

NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 276 of 2007, and relates only to drinking water samples.

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### Certificate of Analysis

**Customer Contact:** Vincent Browne  
**Customer:** EPS Operations Division  
**Customer Address:** Malrow  
Co Cork

**Report Reference:** 13-03131-EPS  
**Report Version:** 1  
**Date Received:** 10/24/2013



Page 3 of 4

**Sample Description:** KINGSALE WWTP FINAL EFFLUENT  
**Sample Type:** Effluent  
**Date Sampled:** 10/23/2013  
**Lab Reference Number:** 164077

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	24/10/2013	Faecal Coliforms	75	cfu/100ml	-	INAB

**Note:**

NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.  
Site D = Analysed at City Analysts Dublin. Site L = Analysed at City Analysts Limerick. Site SUBC= Analysed at a subcontracted lab

Template 1146  
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### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03131-EPS  
Report Version: 1  
Date Received: 10/24/2013



Page 4 of 4

Sample Description: KINGSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 10/24/2013  
Lab Reference Number: 164078

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	24/10/2013	Faecal Coliforms	62	cfu/100ml	-	INAB

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Note:

NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.  
Site D = Analysed at City Analysts Dublin. Site L = Analysed at City Analysts Limerick. Site SUBC= Analysed at a subcontracted lab

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## Certificate of Analysis

**Customer Contact:** Vincent Browne  
**Customer:** EPS Operations Division  
**Customer Address:** Mallow  
Co Cork

**Report Reference:** 13-03046-EPS  
**Report Version:** 1  
**Date Received:** 17/10/2013



Page 2 of 3

**Sample Description:** KINSALE WWTP INFLUENT  
**Sample Type:** Waste water  
**Date Sampled:** 17/10/2013  
**Lab Reference Number:** 163632

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	17/10/2013	CBOD5	5.37	mg/l O2	-	INAB
D/1049	23/10/2013	TSS	5.37	mg/l	-	INAB
D/1223	17/10/2013	Salinity	5.37	PPT	-	NON
L/3228	23/10/2013	Total Nitrogen as N	<10	mg/l	-	INAB
D/3080	24/10/2013	Phosphorous, Total	2.43	mg/l	-	INAB
L/1009	17/10/2013	COD	179	mg/l O2	-	INAB

**Note:**

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.

Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC- Analysed at a subcontracted lab

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### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03046-EPS  
Report Version: 1  
Date Received: 17/10/2013



Page 3 of 3

Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 17/10/2013  
Lab Reference Number: 163633

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/3228	23/10/2013	Total Nitrogen as N	<10	mg/l	-	INAB
D/1223	17/10/2013	Salinity	3.48	PPT	-	NON
D/1049	23/10/2013	TSS	4	mg/l	-	INAB
D/3001	24/10/2013	Phosphorus, total as P	1.150	mg/l	-	INAB
L/1003	17/10/2013	CBOD <sub>5</sub>	<2	mg/l O <sub>2</sub>	-	INAB
L/1009	17/10/2013	COD	24	mg/l O <sub>2</sub>	-	INAB
D/3000	23/10/2013	Ammonia as NH <sub>3</sub>	6.41	mg/l	-	NON

Note:

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 276 of 2007, and relates only to drinking water samples.

Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC - Analysed at a subcontracted lab

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### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03118-EPS  
Report Version: 1  
Date Received: 24/10/2013



Page 2 of 3

Sample Description: KINSALE WWTP INFLUENT  
Sample Type: Waste water  
Date Sampled: 24/10/2013  
Lab Reference Number: 164043

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	24/10/2013	CBOD5	12	mg/l O2	-	INAB

Note:

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.

Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC - Analysed at a subcontracted lab

Template 1148  
Revision 016



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Email:info@cityanalysts.ie

www.cityanalysts.ie

### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03118-EPS  
Report Version: 1  
Date Received: 24/10/2013



Page 3 of 3

Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 24/10/2013  
Lab Reference Number: 164044

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	24/10/2013	CBOD5	2	mg/l O2	-	INAB

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Note:

NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 276 of 2007, and relates only to drinking water samples.  
Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC- Analysed at a subcontracted lab

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### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Malrow  
Co Cork

Report Reference: 13-03131-EPS  
Report Version: 1  
Date Received: 10/24/2013



Page 3 of 4

Sample Description: KINGSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 10/23/2013  
Lab Reference Number: 164077

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	24/10/2013	Faecal Coliforms	75	cfu/100ml	-	INAB

Note:  
NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.  
Site D = Analysed at City Analysts Dublin. Site L = Analysed at City Analysts Limerick. Site SUBC= Analysed at a subcontracted lab

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### Certificate of Analysis

**Customer Contact:** Vincent Browne  
**Customer:** EPS Operations Division  
**Customer Address:** Mallow  
Co Cork

**Report Reference:** 13-03131-EPS  
**Report Version:** 1  
**Date Received:** 10/24/2013



Page 4 of 4

**Sample Description:** KINGSALE WWTP FINAL EFFLUENT  
**Sample Type:** Effluent  
**Date Sampled:** 10/24/2013  
**Lab Reference Number:** 164078

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	24/10/2013	Faecal Coliforms	62	cfu/100ml	-	INAB

**Note:**

NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.  
Site D = Analysed at City Analysts Dublin. Site L = Analysed at City Analysts Limerick. Site SUBC= Analysed at a subcontracted lab

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### Certificate of Analysis

**Customer Contact:** Vincent Browne  
**Customer:** EPS Operations Division  
**Customer Address:** Mallow  
Co Cork

**Report Reference:** 13-03168-EPS  
**Report Version:** 1  
**Date Received:** 31/10/2013



Page 2 of 3

**Sample Description:** KINSALE WWTP INFLUENT  
**Sample Type:** Waste water  
**Date Sampled:** 31/10/2013  
**Lab Reference Number:** 164367

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	31/10/2013	CBOD5	45	mg/l O2	-	INAB

**Note:**

NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 276 of 2007, and relates only to drinking water samples.  
Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC- Analysed at a subcontracted lab

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### Certificate of Analysis

**Customer Contact:** Vincent Browne  
**Customer:** EPS Operations Division  
**Customer Address:** Mallow  
Co Cork

**Report Reference:** 13-03168-EPS  
**Report Version:** 1  
**Date Received:** 31/10/2013



Page 3 of 3

**Sample Description:** KINSALE WWTP FINAL EFFLUENT  
**Sample Type:** Effluent  
**Date Sampled:** 31/10/2013  
**Lab Reference Number:** 154368

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	31/10/2013	CBOD5		mg/l O2	-	INAB

**Note:**

NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.  
Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC- Analysed at a subcontracted lab

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### Certificate of Analysis

**Customer Contact:** Vincent Browne  
**Customer:** EPS Operations Division  
**Customer Address:** Mallow  
Co Cork

**Report Reference:** 13-03193-EPS  
**Report Version:** 1  
**Date Received:** 31/10/2013



Page 2 of 3

**Sample Description:** KINSALE WWTP FINAL EFFLUENT  
**Sample Type:** Effluent  
**Date Sampled:** 30/10/2013  
**Lab Reference Number:** 164397

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	31/10/2013	Faecal Coliforms	22	cfu/100ml	-	INAB

**Note:**

NAC & ATC - No abnormal change and acceptable to customers.  
TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.  
Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC - Analysed at a subcontracted lab

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### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03193-EPS  
Report Version: 1  
Date Received: 31/10/2013



Page 3 of 3

Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 31/10/2013  
Lab Reference Number: 154396

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	31/10/2013	Faecal Coliforms	0	cfu/100ml	-	INAB

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Note:

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TVC - Total Viable Count  
PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.  
Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC - Analysed at a subcontracted lab

Template 1146  
Revision 016



System Procedure  
 Monthly Status Report  
 December 2013

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole



Kinsale Waste Water Treatment Plant

Operational Report  
 For  
 December, 2013

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DATE	DESCRIPTION	REV. No.	APPROVED BY	ISSUED BY
15/01/2013	Initial Issue	0		V Browne



System Procedure  
Monthly Status Report  
December 2013

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

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December 2013

Issue Code:	PMS
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## 1. Introduction

This report covers the period of December 2013 for the operation of Kinsale Waste Water Treatment Plant by EPS on behalf of Cork County Council.

EPS has operated Kinsale WWTP since November 2010

There have been thirty-four monthly reports submitted to Cork County Council since the commencement of operations by EPS.

The format of this report conforms to the requirements of the PMS for WWTP.

## 2. Executive Summary

There were no complaints during the period.

8 no.screening bins were removed during the month.

EPS personnel visited the plant 20 times during the month.

### Influent:

	<b>COD</b>	<b>BOD</b>
Influent Monthly Average (mg/l)	417	111
Average Daily Load (kg)	2017.6	538.6
% of Design Load	134.5	71.8

Total Influent Flow = 150082m<sup>3</sup>, Average Daily Flow = 4841m<sup>3</sup>, Peak Flow = 11318m<sup>3</sup>

Average Influent Salinity = 4935mg/l

Peak Influent Salinity = 7230mg/l

Due to the heavy rainfall during the second half of the month, there were a number of storm overflows at the plant. The COD loading for the plant exceeded its design load for the month.

### Effluent:

The effluent quality was again very good during December and all results were within the discharge limits.



System Procedure  
Monthly Status Report  
December 2013

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

**Other Issues:**

4 skip loads of dewatered sludge were transported off site in December.

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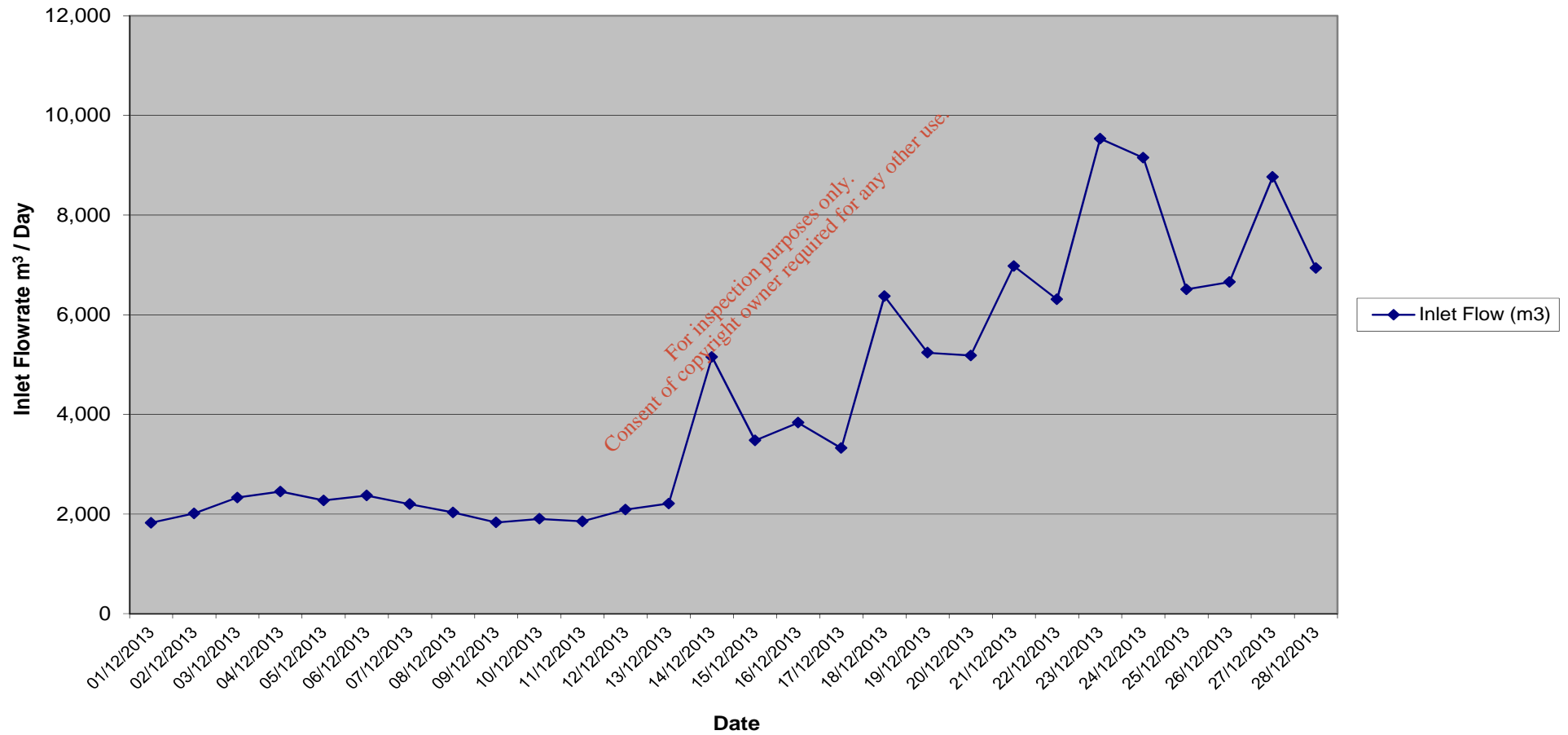
### 3. Graphical Presentation of Data

ARP4/1

Table of total daily inlet flows for December 2013	
Date (Midnight to Midnight)	Inlet Flow (m <sup>3</sup> )
01/12/2013	1,823
02/12/2013	2,011
03/12/2013	2,329
04/12/2013	2,451
05/12/2013	2,272
06/12/2013	2,372
07/12/2013	2,198
08/12/2013	2,032
09/12/2013	1,830
10/12/2013	1,903
11/12/2013	1,852
12/12/2013	2,089
13/12/2013	2,209
14/12/2013	5,152
15/12/2013	3,475
16/12/2013	3,832
17/12/2013	3,321
18/12/2013	6,372
19/12/2013	5,237
20/12/2013	5,181
21/12/2013	6,975
22/12/2013	6,307
23/12/2013	9,532
24/12/2013	9,149
25/12/2013	6,508
26/12/2013	6,656
27/12/2013	8,766
28/12/2013	6,935
29/12/2013	7,383
30/12/2013	10,612
31/12/2013	11,318

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Graph of Total Daily Inlet Flows for December 2013  
ARP4/2



ARP4/3

**Table of total daily outlet flows for December 2013**

Date (Midnight to Midnight)	Outlet Flow (m <sup>3</sup> )
01/12/2013	1,799
02/12/2013	2,102
03/12/2013	2,306
04/12/2013	2,473
05/12/2013	2,301
06/12/2013	2,371
07/12/2013	2,118
08/12/2013	1,991
09/12/2013	1,951
10/12/2013	2,042
11/12/2013	1,782
12/12/2013	2,036
13/12/2013	2,291
14/12/2013	4,701
15/12/2013	3,489
16/12/2013	4,276
17/12/2013	3,305
18/12/2013	5,075
19/12/2013	6,158
20/12/2013	4,920
21/12/2013	6,134
22/12/2013	6,968
23/12/2013	6,710
24/12/2013	7,024
25/12/2013	6,913
26/12/2013	5,828
27/12/2013	7,030
28/12/2013	5,562
29/12/2013	5,289
30/12/2013	7,038
31/12/2013	7,055

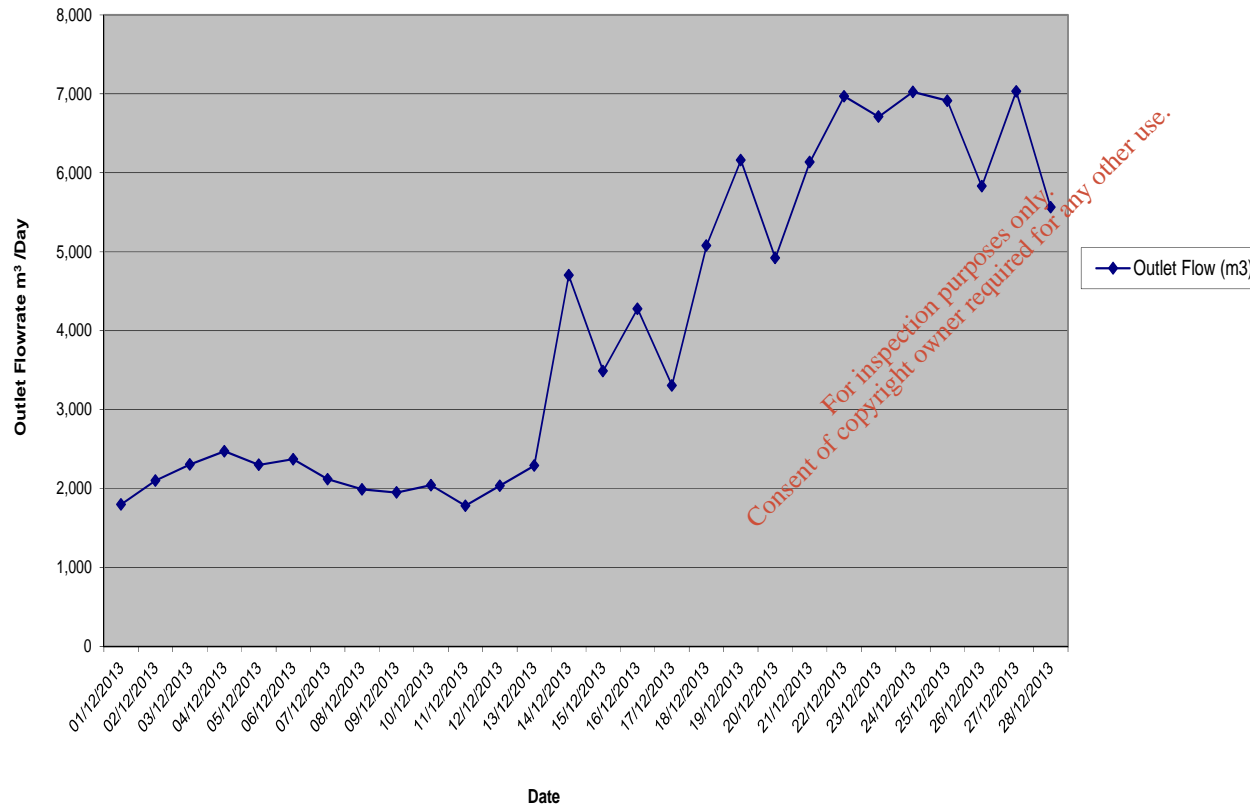
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# System Procedure Monthly Status Report December 2013

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

### Graph of Total Daily Outlet Flows for December 2013 ARP4/4





**System Procedure  
Monthly Status Report  
December 2013**

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

ARP 4/5

<b>Table of BOD &amp; Suspended Solids of Final Effluent for December 2013</b>		
Date	BOD (mg/l)	Suspended Solids (mg/l)
Limit	20	30
1-Dec-13		
2-Dec-13		
3-Dec-13		26
4-Dec-13		
5-Dec-13	2	
6-Dec-13		
7-Dec-13		
8-Dec-13		
9-Dec-13		
10-Dec-13		
11-Dec-13		
12-Dec-13	<2	7
13-Dec-13		
14-Dec-13		
15-Dec-13		
16-Dec-13		21
17-Dec-13		
18-Dec-13	2	
19-Dec-13		
20-Dec-13		
21-Dec-13		
22-Dec-13		
23-Dec-13	5	11
24-Dec-13		
25-Dec-13		
26-Dec-13		
27-Dec-13		
28-Dec-13		
29-Dec-13		
30-Dec-13		
31-Dec-13		

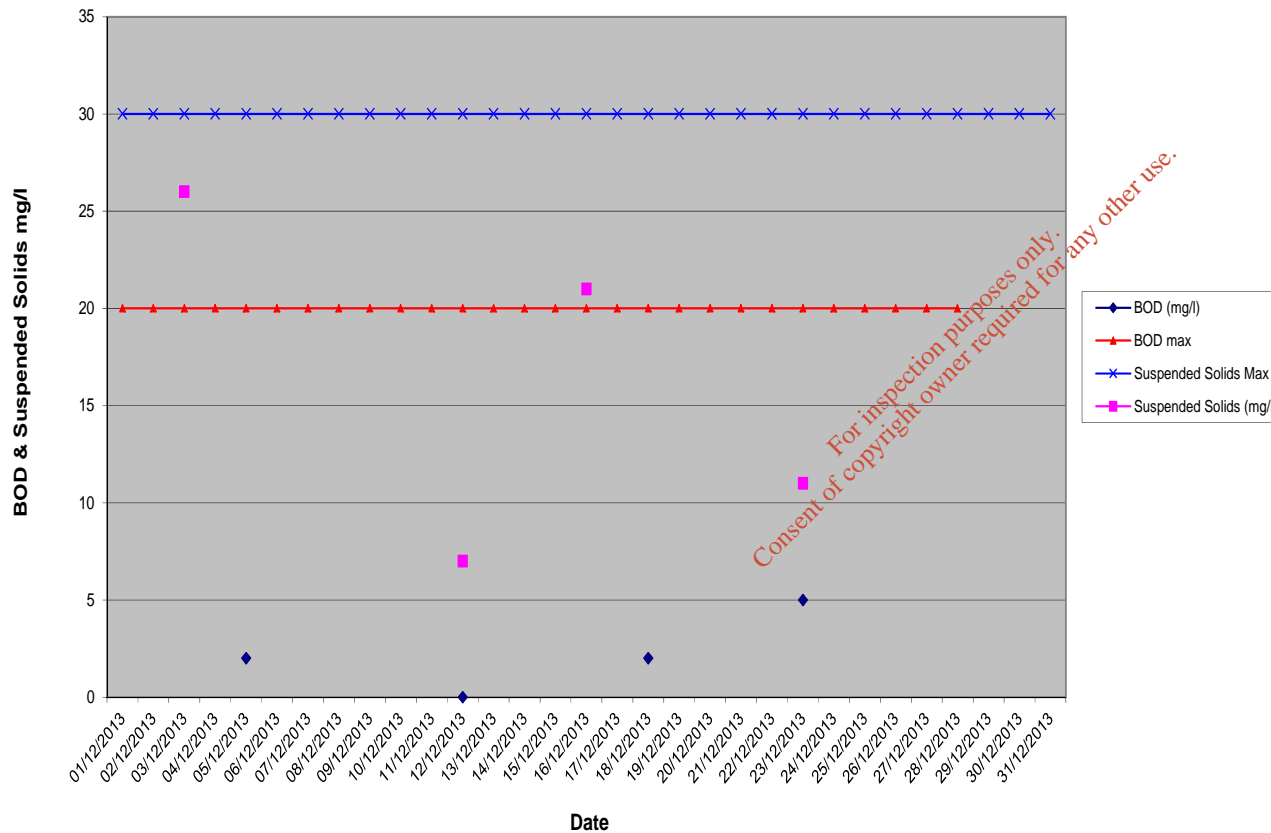
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# System Procedure Monthly Status Report December 2013

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

### Graph of BOD & Suspended Solids of Final Effluent for December 2013 ARP4/6



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ARP 4/7

Table of total phosphorous & total nitrogen of Final Effluent for December 2013		
Date	Total Phosphorous (mg/l P)	Total Nitrogen (mg/l N)
Limit	2	15
01/12/2013		
02/12/2013		
03/12/2013	1.23	8.5
04/12/2013		
05/12/2013		
06/12/2013		
07/12/2013		
08/12/2013		
09/12/2013		
10/12/2013		
11/12/2013		
12/12/2013	1	<10
13/12/2013		
14/12/2013		
15/12/2013		
16/12/2013	0.59	6.8
17/12/2013		
18/12/2013		
19/12/2013		
20/12/2013		
21/12/2013		
22/12/2013		
23/12/2013	0.87	7.8
24/12/2013		
25/12/2013		
26/12/2013		
27/12/2013		
28/12/2013		
29/12/2013		
30/12/2013		
31/12/2013		

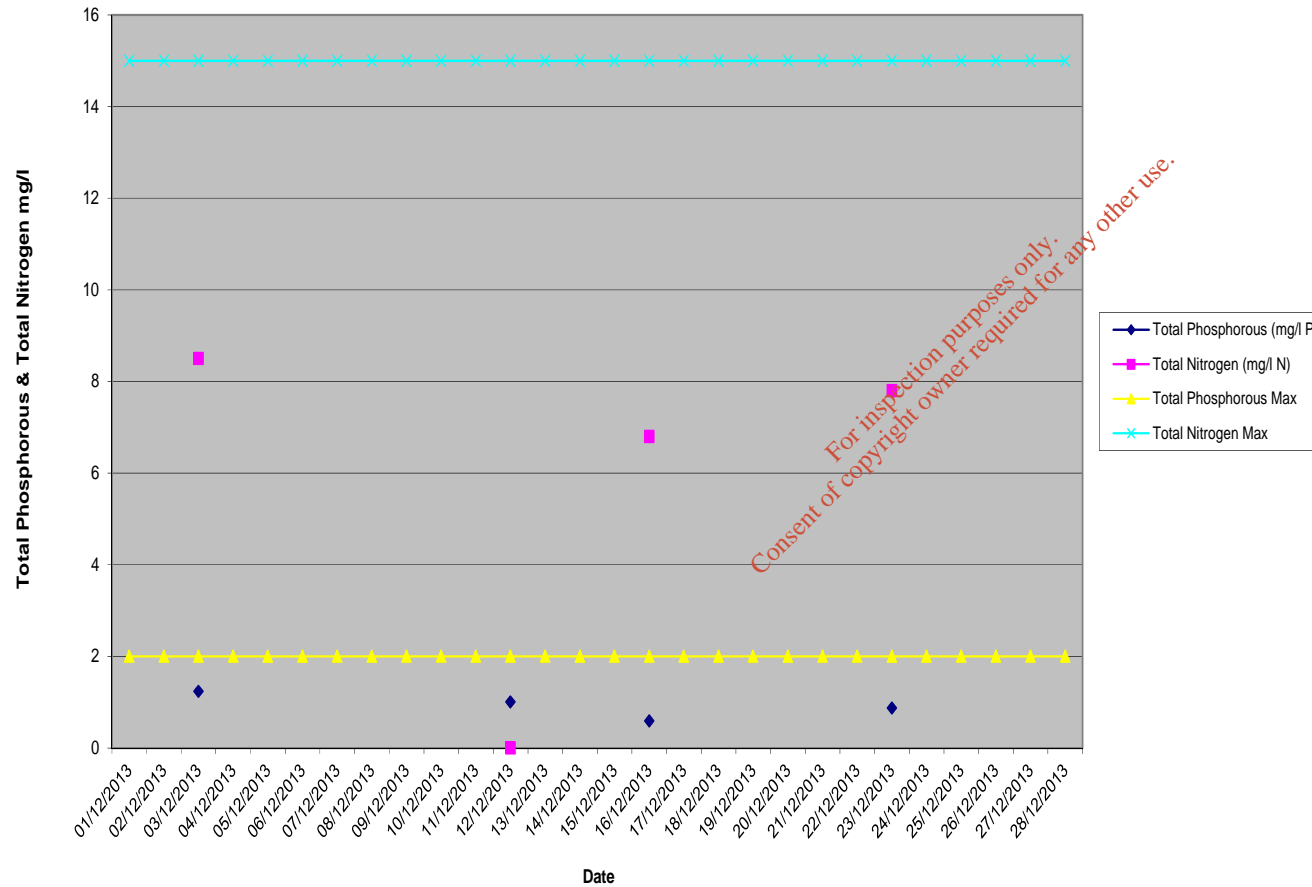
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System Procedure  
Monthly Status Report  
December 2013

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

Total Phosphorous & Total Nitrogen of Final Effluent for December 2013  
ARP4/8







System Procedure  
Monthly Status Report  
December 2013

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

#### 4. Comments on Analysis Results

The effluent quality was again very good during December and all results were within the discharge limits.

The influent salinity is still fluctuating with the tidal conditions. All influent samples tested were well above the 400 mg/l salinity specification. The peak salinity figure for the month was 7230 mg/l.

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Monthly Status Report  
December 2013**

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

ARP7/3

**No Accidents occurred during this period**

**Health & Safety Statistics Report**

Plant Manager Vincent Browne Date 15 January 2014  
 For Period Dec-13  
 Site Involved Kinsale WWTP

Category 1: Covers Fatalities and major Injuries  
 Category 2: Covers lost time accident resulting in more than 3 days absence  
 Category 3: Covers lost time accidents resulting in 3 days absence or less  
 Major Incident: Accident not covered by categories 1 to 3

**Direct Employees**

Number of Employees:		3	Exposure Hours:		120
	Category 1	Category 2	Category 3	Major Incident	Near Miss
Number of Accidents	0	0		0	0
Days lost					

**Direct Employees**

Number of Employees:					
Subcontractors on Site					
	Category 1	Category 2	Category 3	Major Incident	Near Miss
Number of Accidents					
Days lost					

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## 8. Complaints Register

ARP9

**No complaints were received during this reporting period**

Complaints Register		
Date of Complaint	None	Complainant's Address:
Complaint's Name		
Nature of Complaint		
Acknowledgement of Complaint	Author of Acknowledgement	Date Sent
Cause of Complaint		
Action taken to Resolve cause of Complaint:		
Final Outcome Report	Author of Final Outcome Report	Date Forwarded to Local Authority

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## 10. Analysis Results for the EPA

ARP11

Analysis Results for EPA	
Sample No:	None
Sample Date:	
Parameter	Concentration (mg/l)
BOD	
COD	
SS	
TN	
TP	

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**System Procedure  
Monthly Status Report  
December 2013**

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

## 11. Site Visit Records

ARP12

Site Visit Record					
Date	Name	Company & Position	Arrival Time	Departure Time	Purpose of Visit
01/01/2014					
02/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
03/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
04/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
05/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
06/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
07/01/2014					
08/01/2014					
09/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
10/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
11/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
12/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
13/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
14/01/2014					
15/01/2014					
16/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
17/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
18/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
19/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
20/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
21/01/2014					
22/01/2014					
23/01/2014	V Browne: B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
24/01/2014					
25/01/2014					
26/01/2014	K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
27/01/2014	B Farkas: K Murphy	EPS	8:30:00	17:00:00	Plant Supervision
28/01/2014					
29/01/2014					
30/01/2014	Joe Browne	EPS	8:30:00	17:00:00	Plant Supervision
31/01/2014	K Murphy	EPS	8:30:00	17:00:00	Plant Supervision

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## 12. Weather Records

ARP13

Weather Record		
Date	Day	Rainfall (mm)
01/12/2013	Sun	0
02/12/2013	Mon	0
03/12/2013	Tue	0.2
04/12/2013	Wed	0.4
05/12/2013	Thu	0
06/12/2013	Fri	1.7
07/12/2013	Sat	0.2
08/12/2013	Sun	0.1
09/12/2013	Mon	0
10/12/2013	Tue	4.4
11/12/2013	Wed	1.6
12/12/2013	Thu	6.7
13/12/2013	Fri	4.5
14/12/2013	Sat	21.9
15/12/2013	Sun	3.6
16/12/2013	Mon	5
17/12/2013	Tue	4.4
18/12/2013	Wed	19.7
19/12/2013	Thu	3.1
20/12/2013	Fri	11.3
21/12/2013	Sat	12.5
22/12/2013	Sun	2.7
23/12/2013	Mon	24.3
24/12/2013	Tue	6.8
25/12/2013	Wed	0.1
26/12/2013	Thu	16.4
27/12/2013	Fri	3.1
28/12/2013	Sat	0.0
29/12/2013	Sun	18.3
30/12/2013	Mon	16.8
31/12/2013	Tue	21.6

**Note: Rainfall data is taken from Met-Eireann weather station at Cork Airport**



## 14. Storm Tank Records

ARP15

Storm Tank Record		
Date	Flow to Storm Tank (M <sup>3</sup> )	Storm Overflow to Outfall (M <sup>3</sup> )
01/12/2013	0	0
02/12/2013	0	0
03/12/2013	1	0
04/12/2013	0	0
05/12/2013	0	0
06/12/2013	0	0
07/12/2013	0	0
08/12/2013	0	0
09/12/2013	0	0
10/12/2013	0	0
11/12/2013	0	0
12/12/2013	2	0
13/12/2013	0	0
14/12/2013	606	0
15/12/2013	24	0
16/12/2013	0	0
17/12/2013	3	0
18/12/2013	472	0
19/12/2013	485	0
20/12/2013	45	0
21/12/2013	520	0
22/12/2013	748	0
23/12/2013	1,436	1,248
24/12/2013	1,069	969
25/12/2013	546	0
26/12/2013	500	0
27/12/2013	771	0
28/12/2013	28	0
29/12/2013	479	0
30/12/2013	1,613	2,075
31/12/2013	1,911	2,448



**System Procedure  
Monthly Status Report  
December 2013**

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

## 15. Equipment Calibration Records

ARP16

Equipment Calibration Record						
Date	Equipment Description	Serial No.	Calibrated By (Name & Company)	Next Calib. Due	Calib. Cert Recd.	Comment
11/12/2013	Dissolved Oxygen Probes	-	K Murphy (EPS)	11/01/2014		OK

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## 17. Plant Maintenance Records

Plant Maintenance Record			
Date	Plant Item	Description of Work	Carried out by
02/12/2013	Inlet Screen	Check screen	K Murphy
02/12/2013	Inlet & Process Blowers	Check oil level	K Murphy
02/12/2013	Drum Thickener 1 & 2	Grease bearings	K Murphy
02/12/2013	Centrifuge 1 & 2	Grease bearings	K Murphy
04/12/2013	Decanter Winch 1 to 4	Checked chain tension and winch settings	K Murphy
09/12/2013	Inlet Screen	Check screen	K Murphy
09/12/2013	Inlet & Process Blowers	Check oil level	K Murphy
09/12/2013	Drum Thickener 1 & 2	Grease bearings	K Murphy
09/12/2013	Centrifuge 1 & 2	Grease bearings	K Murphy
11/12/2013	Drum Thickener 1 & 2	Checked chain tension and winch settings	K Murphy
16/12/2013	Inlet Screen	Check screen	K Murphy
16/12/2013	Inlet & Process Blowers	Check oil level	K Murphy
16/12/2013	Drum Thickener 1 & 2	Grease bearings	K Murphy
16/12/2013	Centrifuge 1 & 2	Grease bearings: Clean protective hood	K Murphy
23/12/2013	Inlet Screen	Check screen	K Murphy
23/12/2013	Inlet & Process Blowers	Check oil level	K Murphy
23/12/2013	Drum Thickener 1 & 2	Grease bearings	K Murphy
23/12/2013	Centrifuge 1 & 2	Grease bearings	K Murphy
30/12/2013	Inlet Screen	Check screen	K Murphy
30/12/2013	Inlet & Process Blowers	Check oil level	K Murphy
30/12/2013	Drum Thickener 1 & 2	Grease bearings	K Murphy
30/12/2013	Centrifuge 1 & 2	Grease bearings	K Murphy

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System Procedure  
Monthly Status Report  
December 2013

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Originator:	B Farkas
Authorised by:	B O Toole

## 19. Analysis Results for Raw Influent, Settled Sewage & Mixed Liquor

ARP20

Date	Analysis Results for Raw Influent & Mixed Liquor																		
	Raw Influent							SBR 1 Mixed Liquor			SBR 2 Mixed Liquor			SBR 3 Mixed Liquor			SBR 4 Mixed Liquor		
	BOD mg/l O <sub>2</sub>	COD mg/l O <sub>2</sub>	SS mg/l	TP mg/l P	TN mg/l N	Salinity (mg/l)	pH	SSV ml	SS mg/l	SVI ml/g	SSV ml	SS mg/l	SVI ml/g	SSV ml	SS mg/l	SVI ml/g	SSV ml	SS mg/l	SVI ml/g
01/12/2013		475																	
02/12/2013		476																	
03/12/2013		455	133	3.4	40.5	7230	6.9	650	2660	244.36	550	2376	231.48	700	2824	247.88	370	2492	148.48
04/12/2013		438																	
05/12/2013	147	432																	
06/12/2013		444						520	2676	194.32	380	2332	162.95	500	2856	175.07	410	2692	152
07/12/2013		457																	
08/12/2013		463																	
09/12/2013		503																	
10/12/2013		486						670	2708	247.42	390	2340	166.67	550	2560	214.84	400	2464	162.34
11/12/2013		472																	
12/12/2013	144	473	130	4.08	22.39	3450	6.83												
13/12/2013		482						690	2636	261.76	350	2088	167.62	520	2332	222.98	360	2308	156
14/12/2013		475																	
15/12/2013		430																	
16/12/2013		420	131	1.78	9	4180	6.84				350	2076	168.59	390	2228	175.04	320	2096	152.67
17/12/2013		460																	
18/12/2013	116	505																	
19/12/2013		443						710	2920	243.15									
20/12/2013		390									335	2224	150.63	320	1972	162.27	275	1772	155.19
21/12/2013		375																	
22/12/2013		350																	
23/12/2013	38	344	59	1.1	8.8	4880	7.53												
24/12/2013		327																	
25/12/2013		324																	
26/12/2013		325																	
27/12/2013		339																	
28/12/2013		328																	
29/12/2013		347																	
30/12/2013		352						550	2144	257	340	1916	177	270	1440	188	360	2068	174
31/12/2013		328																	



## 21. Analysis Results for Final Effluent

ARP22

Analysis Results for Final Effluent								
Date	BOD (mg/l O <sub>2</sub> )	COD (mg/l O <sub>2</sub> )	SS (mg/l)	Total P (mg/l P)	Total N (mg/l N)	NH3 (mg/l)	Faecal Coliform (No./100mls)	Flow Per Day (M <sup>3</sup> )
Limit	20	125	30	2	15	NA		
01/12/2013		44.65						1799
02/12/2013		44.66						2102
03/12/2013		44.66	26	1.23	8.5	5.1		2306
04/12/2013		44.66					15	2473
05/12/2013	2	44.65					27	2301
06/12/2013		44.65						2371
07/12/2013		44.66						2118
08/12/2013		44.65						1991
09/12/2013		44.66						1951
10/12/2013		44.67						2042
11/12/2013		44.67					11	1782
12/12/2013	<2	44.67	7	1	<10	4.69	23	2036
13/12/2013		44.67						2291
14/12/2013		44.66						4701
15/12/2013		44.67						3489
16/12/2013		44.66	21	0.59	6.8	3		4276
17/12/2013		44.66						3305
18/12/2013	2	44.65					5	5075
19/12/2013		44.66					8	6158
20/12/2013		44.64						4920
21/12/2013		44.66						6134
22/12/2013		44.66						6968
23/12/2013	5	44.65	11	0.87	7.8	0.2	19	6710
24/12/2013		44.66						7024
25/12/2013		44.65						6913
26/12/2013		44.64						5828
27/12/2013		44.65						7030
28/12/2013		44.65						5562
29/12/2013		44.64						5289
30/12/2013		44.65						7038
31/12/2013		44.66						7055







## 23. Analysis Results for Microscopic Analysis

ARP24

**No Microscopic Analysis was carried out during this period**

Analysis Results for Microscopic Examination	
Sample Date: <b>None</b>	
Sample Ref No:	
Activated Sludge Characteristics	Comments
Flock Shape: (Round, Irregular, Cylindrical)	
Floc Size	
Floc Form & Strength: (Open, Closed, Weak, Strong)	
Colonies:	
Dispersed Bacteria:	
Filamentous Bacteria (on a scale 1-6, None to excessive):	
Effect of Filaments (Bridged, Attached material, Distrupting Floc):	
Fungi:	
Protozoa:	<b>Ciliates:</b>
	<b>Flagella:</b>
	<b>Amoeboid:</b>
Higher Organisms:	<b>Rotifers:</b>
	<b>Nematodes:</b>

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## 24. Analysis Results of Random Sampling by Employer

ARP25

Results of Random Analysis By Employer			
Sample Date	None		
	Sample No:		Split Sample No:
Parameter	Sample Concentration (mg/l)		Split Sample Concentration (mg/l)
BOD			
COD			
SS			
TN			
TP			

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## 25. Facility Maintenance Records

ARP26

Facility Maintenance Record			
A = Excellent B = Acceptable C = Unacceptable			
Completed On Site	A	B	C
<b>1. Lawn Maintenance</b>			
A. Grass cut & collected	A		
B. Edging tidy	A		
<b>2. Shrub Maintenance</b>			
A. Bushes pruned	A		
B. Trees erect & staked where required	A		
C. Hedges cut	A		
<b>3. Hard Surfaces</b>			
A. All surfaces swept	A		
B. All surfaces free of algae, moss etc	A		
C. Road Surfaces clean & adequate	A		
D. All roofs free of algae, moss	A		
<b>4. Exterior Painting</b>			
A. All buildings painted & clean	A		
b. All gates & doors painted	A		
<b>5. Housekeeping</b>			
A. Litter removed from site	A		
B. Surface area around bins & skips clean	A		
C. Site free from spillages		B	
<b>6. Buildings</b>			
A. Roof in waterproof condition	A		
B. Glazing in good order	A		
<b>7. Interior Painting</b>			
A. All rooms painted & clean	A		
<b>8. Welfare &amp; Sanitation</b>			
A. Toilet/washing facilities clean		B	
B. Canteen clean		B	



System Procedure  
Monthly Status Report  
December 2013

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

## 26. Emergency Event Records

**There were no emergency events during this reporting period**

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System Procedure  
Monthly Status Report  
December 2013

Issue Code:	PMS
Date of Issue:	15/01/2013
Originator:	B Farkas
Authorised by:	B O Toole

**Appendix 1 – External Laboratory Reports**

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Fax:(01) 613 6008  
Email:info@cityanalysts.ie

[www.cityanalysts.ie](http://www.cityanalysts.ie)

### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03807-EPS  
Report Version: 1  
Date Received: 05/12/2013



Page 2 of 3

Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 04/12/2013  
Lab Reference Number: 166688

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	05/12/2013	Faecal Coliforms	0	cfu/100ml	-	INAB

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**Note:**

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007, S.I. No. 278 of 2007, and relates only to drinking water samples.

Site D = Analysed at City Analysts Dublin. Site L = Analysed at City Analysts Limerick. Site SUBC= Analysed at a subcontracted lab

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Customer: EPS Operations Division  
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Co Cork

Report Reference: 13-03607-EPS  
Report Version: 1  
Date Received: 05/12/2013



Page 3 of 3

Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 05/12/2013  
Lab Reference Number: 166689

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	05/12/2013	Faecal Coliforms	27	cfu/100ml	-	INAB

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Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03758-EPS  
Report Version: 1  
Date Received: 19/12/2013



Page 2 of 3

Sample Description: KINSALE WWTP INFLUENT  
Sample Type: Waste water  
Date Sampled: 18/12/2013  
Lab Reference Number: 167666

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	19/12/2013	CBOD5	0.6	mg/l O2	-	INAB

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Report Version: 1  
Date Received: 19/12/2013



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Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 18/12/2013  
Lab Reference Number: 167667

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	19/12/2013	CBOD5	2	mg/l O2	-	INAB

Note:

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007, S.I. No. 278 of 2007, and relates only to drinking water samples.

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Customer Address: Mallow  
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Report Reference: 13-03706-EPS  
Report Version: 1  
Date Received: 12/12/2013



Page 2 of 3

Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 11/12/2013  
Lab Reference Number: 167281

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	12/12/2013	Faecal Coliforms	0	cfu/100ml	-	INAB

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Note:

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TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007, S.I. No. 278 of 2007, and relates only to drinking water samples.

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Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 12/12/2013  
Lab Reference Number: 167282

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	12/12/2013	Faecal Coliforms	23	cfu/100ml	-	INAB

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Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03686-EPS  
Report Version: 1  
Date Received: 12/12/2013



Page 2 of 3

Sample Description: KINSALE WWTP INFLUENT  
Sample Type: Waste water  
Date Sampled: 12/12/2013  
Lab Reference Number: 167231

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3060	17/12/2013	Phosphorous, Total	506	mg/l	-	INAB
D/1049	18/12/2013	TSS	130	mg/l	-	INAB
D/1223	12/12/2013	Salinity	3.45	PPT	-	NON
L/1009	12/12/2013	COD	458	mg/l O2	-	INAB
L/3228	18/12/2013	Total Nitrogen as N	22.39	mg/l	-	INAB
L/1003	12/12/2013	CBOD5	144	mg/l O2	-	INAB

Note:

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.

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Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03886-EPS  
Report Version: 1  
Date Received: 12/12/2013



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Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 12/12/2013  
Lab Reference Number: 167232

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	12/12/2013	CBOD5	34	mg/l O2	-	INAB
D/1049	18/12/2013	TSS	7	mg/l	-	INAB
D/3000	16/12/2013	Ammonia as NH3	4.69	mg/l	-	INAB
D/1223	12/12/2013	Salinity	3.67	PPT	-	NON
D/3001	17/12/2013	Phosphorus, total as P	1.000	mg/l	-	INAB
L/1009	12/12/2013	COD	34	mg/l O2	-	INAB
L/3228	18/12/2013	Total Nitrogen as N	<10	mg/l	-	INAB

Note:

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007, S.I. No. 278 of 2007, and relates only to drinking water samples.

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Customer: EPS Operations Division  
Customer Address: Malrow  
Co Cork

Report Reference: 13-03783-EPS  
Report Version: 1  
Date Received: 23/12/2013



Page 3 of 4

Sample Description: KINSALE WWTP INFLUENT  
Sample Type: Waste water  
Date Sampled: 23/12/2013  
Lab Reference Number: 167847

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Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
L/1003	23/12/2013	CBOD5	Ng	mg/l O2	-	INAB

Note:

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007, S.I. No. 278 of 2007, and relates only to drinking water samples.

Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC - Analysed at a subcontracted lab

Template 1146  
Revision 016



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### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03783-EPS  
Report Version: 1  
Date Received: 23/12/2013



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Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 23/12/2013  
Lab Reference Number: 167848

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation status
L/1003	23/12/2013	CBOD5		mg/l O2	-	INAB

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### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
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Report Reference: 13-03771-EPS  
Report Version: 1  
Date Received: 19/12/2013



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Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 18/12/2013  
Lab Reference Number: 167702

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	19/12/2013	Faecal Coliforms	5	cfu/100ml	-	INAB

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Note:

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Site D = Analysed at City Analysts Dublin. Site L = Analysed at City Analysts Limerick. Site SUBC= Analysed at a subcontracted lab

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Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
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Report Reference: 13-03771-EPS  
Report Version: 1  
Date Received: 19/12/2013



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Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 19/12/2013  
Lab Reference Number: 167703

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	19/12/2013	Faecal Coliforms	8	cfu/100ml	-	INAB

Note:

NAC & ATC - No abnormal change and acceptable to customers.

TVC - Total Viable Count

PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007, S.I. No. 278 of 2007, and relates only to drinking water samples.

Site D = Analysed at City Analysts Dublin. Site L = Analysed at City Analysts Limerick. Site SUBC= Analysed at a subcontracted lab

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### Certificate of Analysis

Customer Contact: Vincent Browne  
Customer: EPS Operations Division  
Customer Address: Mallow  
Co Cork

Report Reference: 13-03798-EPS  
Report Version: 1  
Date Received: 23/12/2013



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Sample Description: KINSALE WWTP FINAL EFFLUENT  
Sample Type: Effluent  
Date Sampled: 23/12/2013  
Lab Reference Number: 167873

Site/Method Ref.	Analysis Start Date	Parameter	Result	Units	PV Value	Accreditation Status
D/3221	23/12/2013	Faecal Coliforms	19	cfu/100ml	-	INAB

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Note:

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PV Value is the parametric value, taken from European Communities, (Drinking Water) (No. 2) Regulations, 2007. S.I. No. 278 of 2007, and relates only to drinking water samples.

Site D - Analysed at City Analysts Dublin. Site L - Analysed at City Analysts Limerick. Site SUBC- Analysed at a subcontracted lab

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