

RINGSEND WASTEWATER TREATMENT WORKS Dublin Bay Survey – Data Summary



Dec 2009 Draft Report

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1. Overview

DCC (DCC) was requested by the Environmental Protection Agency (EPA) to undertake a water quality survey of Dublin Bay and its estuaries to establish the level of nutrients in the waters. DCC commissioned CDM (Ireland) to undertake this work over a 12 month period from December 2008 through November 2009.

Direct measurements and water samples were taken close to both High and Low Water during spring and neap tides over the 12 month period at 22 sites in the bay and estuaries of Liffey and Tolka (see Figure 1.1). In addition personnel from DCC were taking samples onshore from ten fresh water inflows. CDM adopted a flexible approach to the survey work to ensure minimum data loss due to bad weather; weather forecasts were closely monitored and larger vessels were chartered when sea conditions were more severe. As a result only part of one data set was missed (August 2009). During the project duration 1230 samples were taken and analysed in DCC Central Laboratory.

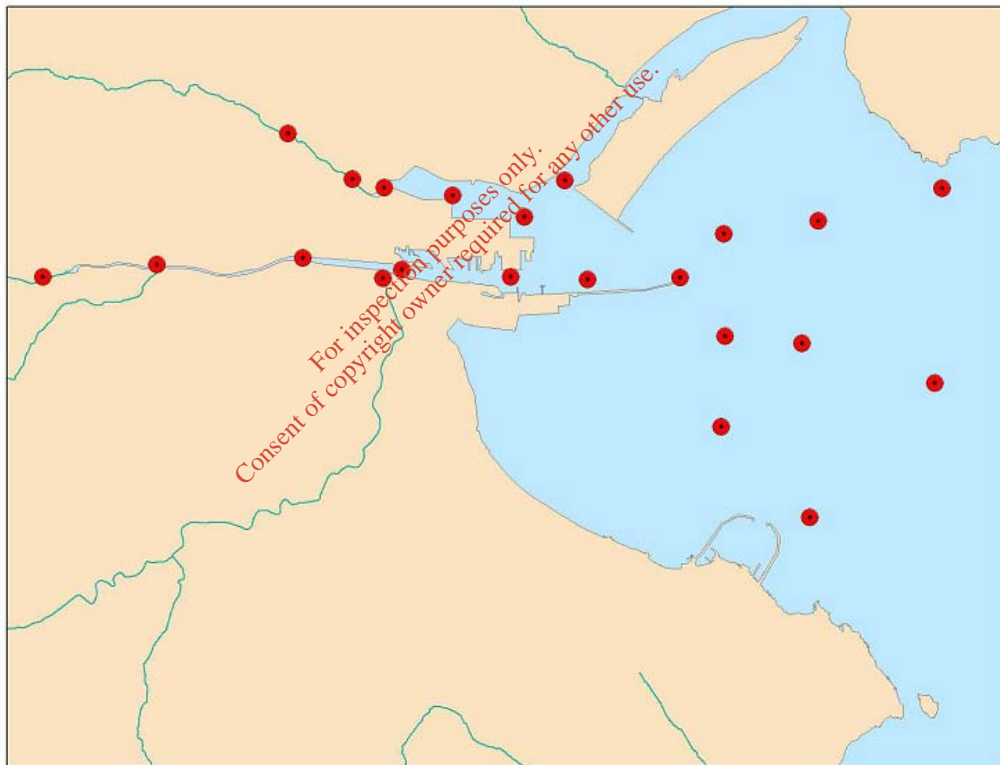


Figure 1.1 Locations sampled by CDM team

Figures 1.2 and 1.3 show the two boats used for the survey work; Figure 1.2 is the Eastern River Basin District's Mobile Monitoring Unit which was used for the estuaries and inshore work. The boat shown in Figure 1.3 was chartered to undertake the monitoring at the more offshore sites in poor weather conditions.



Figure 1.2 ERBD RIB "Ginger"



Figure 1.3 "Brain Boru" from Dublin Tours

Overall the results demonstrate nutrient levels within the bay are in general at a lower level than those required for “Good Status” under the Water Framework Directive the Environmental Quality Standards (EQS) with the exception of 2-3 events with high readings. One of them was caused by very high rain fall in early February.

2. Survey Methodology

Each site shown in Figure 1.1 was sampled on both Spring and Neap tides. Estuaries were sampled close to high and low water (± 2 hours) as required by the EPA. Samples from the bay were taken during mid tidal zone. The following parameters were measured by direct reading instrumentation:

- Salinity
- Temperature
- Dissolved Oxygen
- Percent Oxygen Saturation

Other parameters necessitated water sampling and subsequent analysis by DCC's Central Laboratory:

- Molybdale Reactive Phosphorus (MRP)
- Ammonia
- Chlorophyll
- Pheophytin
- Silica
- Total Oxidised Nitrogen (TON)
- BOD (saline)

In the summary the ammonia and TON results were added to create DIN – Dissolved Inorganic Nitrogen because there are no standards for single nitrogen compounds for saline waters. Limits proposed by Water Framework Directive (Draft EC Environmental Objectives (SW) Regs. 2008) relating to DIN are $170\mu\text{g/L}$ for High Status and $250\mu\text{g/L}$ for Good Status waters. In this summary Good Status criterion was used.

Second parameter looked at was MRP. Current standard for MRP in transitional waters is $60\mu\text{g/L}$ for salinity up to 17 practical salinity units (psu) and $40\mu\text{g/L}$ for salinity up to 35psu. Therefore all MRP results for The Bay have to be measured

against lower limit of 40µg/L. Surface samples from upper parts of the estuaries can be checked against EQS of 60µg/L.

Table below shows list of all sampling locations, their EPA code and assigned lab source code. Source codes for depth samples for each site were one number higher than corresponding surface sample ie. site with surface sample 130700 had depth sample with 130701 code.

Table 2.1 Sampling points

Waterbody	Sampling Point	EPA code	Source code	X	Y
Dublin Bay	1km NE Poolbeg Lighthouse	DB430	130700	324130	234901
Dublin Bay	South Bull Buoy: 1km SE Poolbeg Lighthouse	DB450	130710	324159	233042
Dublin Bay	2.5km ENE Poolbeg Lighthouse	DB510	130720	325850	235136
Dublin Bay	2.5km SSE Poolbeg Lighthouse	DB540	130730	325549	232901
Dublin Bay	No 4 Buoy: 2.5km E of S Poolbeg Lighthouse	DB550	130740	324088	231393
Dublin Bay	Drumleck Point: 5 km ENE Poolbeg Lighthouse	DB560	130750	328106	235731
Dublin Bay	5 km ESE Poolbeg Lighthouse	DB570	130760	327968	232186
Dublin Bay	Dun Laoghaire: 5 km E of S Poolbeg Lighthouse	DB580	130770	325699	229742
Liffey Estuary	Dodder / Grand Canal Basin	DB120	130800	317927	234086
Liffey Estuary	East Link Toll Bridge	DB210	130810	318270	234251
Liffey Estuary	RO RO Ramp No 5 (Old TW Outfall)	DB220	130820	320259	234111
Liffey Estuary	Ringsend Cascade	DB410	130830	321656	234065
Liffey Estuary	Poolbeg Lighthouse	DB420	130840	323331	234099
Liffey Estuary	Liffey at Islandbridge	DB000	130850	311750	234115
Liffey Estuary	Liffey at Heuston Bridge	DB010	130860	313823	234343
Liffey Estuary	Liffey at Matt Talbot Bridge	DB020	130870	316479	234463
Tolka Estuary	Tolka at Drumcondra Bridge	DB300	130880	316197	236727
Tolka Estuary	Tolka Estuary at Annesley Rd Br	DB310	130890	317370	235899
Tolka Estuary	Tolka Estuary at Eastpoint Business Park Br	DB320	130900	317953	235735
Tolka Estuary	Tolka Estuary, Castle Avenue	DB330	130910	319200	235600
Tolka Estuary	Tolka Estuary, Clontarf Boat Club	DB340	130920	320500	235200
Tolka Estuary	Tolka Est/ S Lagoon at Bull Wall Wooden Br	DB350	13930	321240	235873

Locations on the Lower Liffey Estuary had to be altered between 130820 to 130840. Originally points were chosen to be in the middle of the channel used by all ship traffic coming in and out from Dublin Port. Samples were taken as close as possible to original position but outside navigation channel. The point possibly most affected by this could be station at Ringsend Cascade (130830) - nutrient levels could be higher because sampling location was closer to Ringsend WwTW than originally anticipated. In addition sample 130840 in times of rough conditions was taken upstream from Poolbeg Lighthouse, not downstream.

3. Results

The survey results are presented in tabular form in Appendix A and have been provided to the EPA by DCC in spreadsheet format.

Graphs of the nutrient parameters are presented in the sections below. Linear nature of the graphs makes sense in case of the Liffey and Tolka data starting with the most upstream locations and ending with the most downstream samples. Graphs containing Dublin Bay data use the same type of diagram but are constructed different. In this case lack of linear continuity has to be emphasised and from the left side points starts with locations closest to Poolbeg Lighthouse to ones further away on the right. To ease analysis of the data CDM will prepare in January 2010 a 3-D visualisation in GIS of all results so any changes between the points and water bodies will be tracked spatially.

3.1. Dissolved Inorganic Nitrogen

Figure 3.1 presents the Dissolved Inorganic Nitrogen (DIN) 1m above the seabed for the 8 sampling locations in the bay. The concentrations of DIN are consistently within the range 25 - 200µg/L. The only exceptions are the slightly higher concentrations at the mouth of the Liffey estuary and a single measurement of over 800µg/L at station 130761 on 15th July. This station is located on the east end of the bay half way between the Howth and Dun Laoghaire. This site was one among the cleanest during the project. Although it was raining for two days before sampling other stations from this day did not record elevated readings. There is a possibility that this sample might have been contaminated – this would explain so high reading.

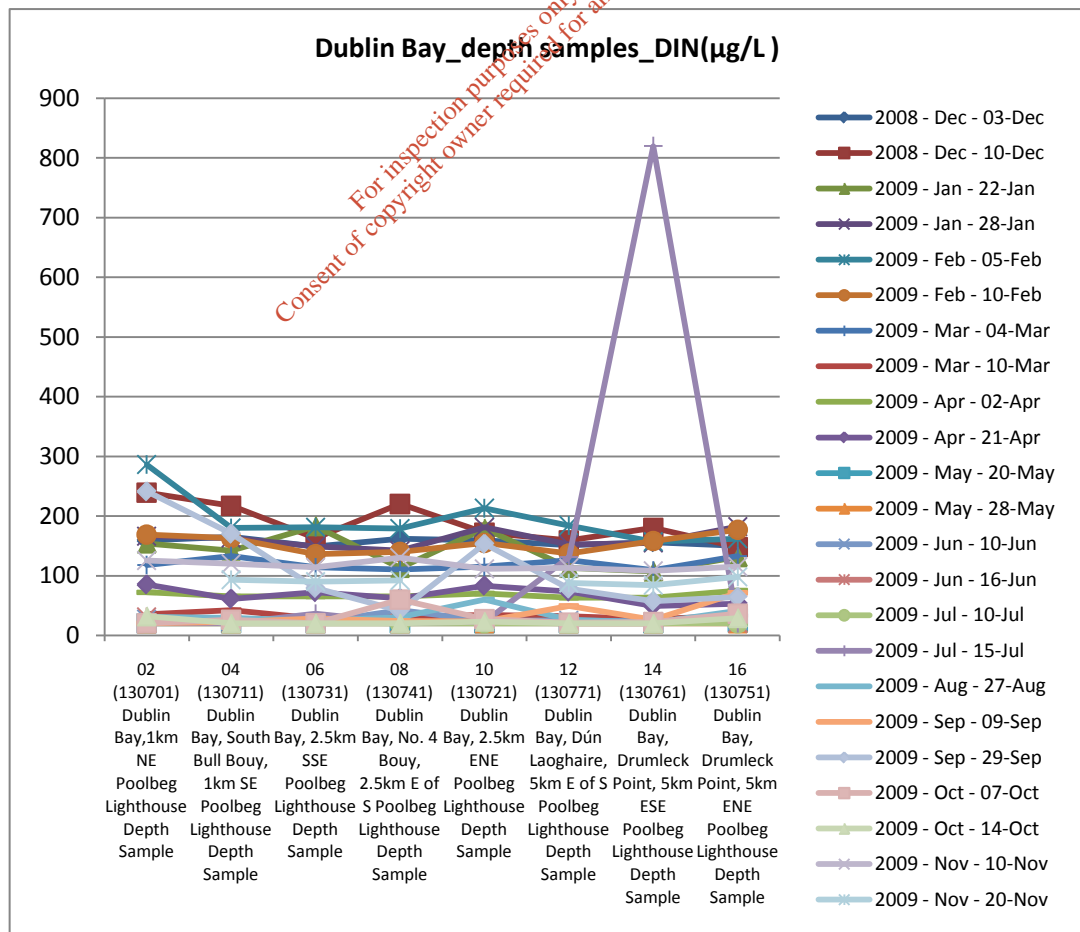


Figure 3.1 Dublin Bay depth sampels

Figure 3.2 shows the DIN concentrations for the surface water samples and a similar pattern can be seen. In this case the levels discharging from the Liffey estuary are higher than at the bed, reflecting the buoyancy of the freshwater discharge from the river and effluent from WwTW. In the surface samples two cases of elevated DIN are evident at station 130770; one is on 15th July as in Figure 3.1, but the other is in February 2009 when elevated DIN can be seen at all stations with very high discharge concentrations from the estuary. On this occasion rainfall for four days before sampling reached 50mm in total.

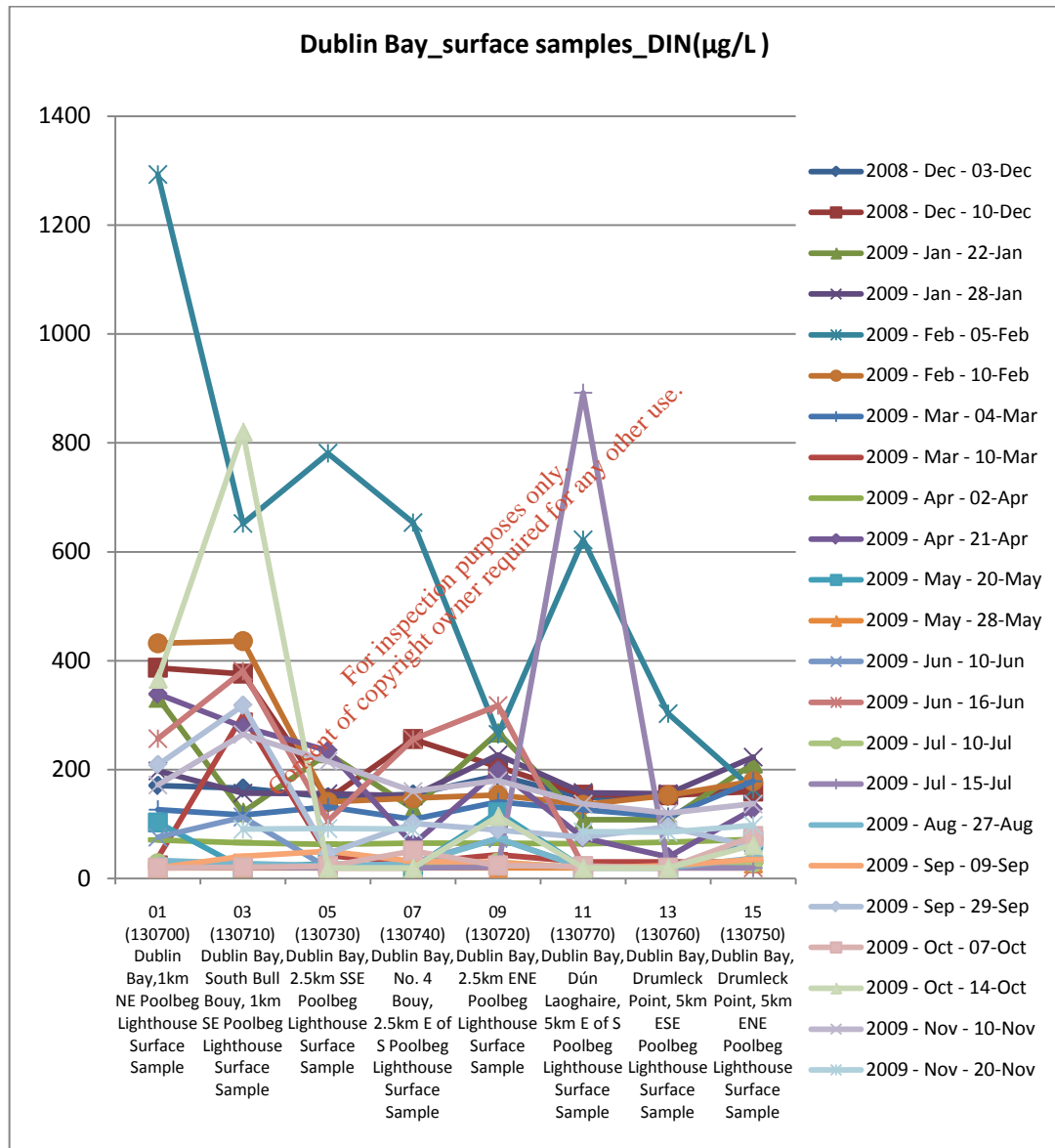


Figure 3.2 Dublin Bay surface sampels

Figures 3.3 and 3.4 present the DIN concentrations in the Liffey estuary during the survey campaign. Both show elevated DIN levels, especially in the surface samples. There is a general trend of decreasing DIN levels downstream, but with a modest to high increase at the Ringsend Cascade (130830) – visible influence of Ringsend WwTW effluent outfall.

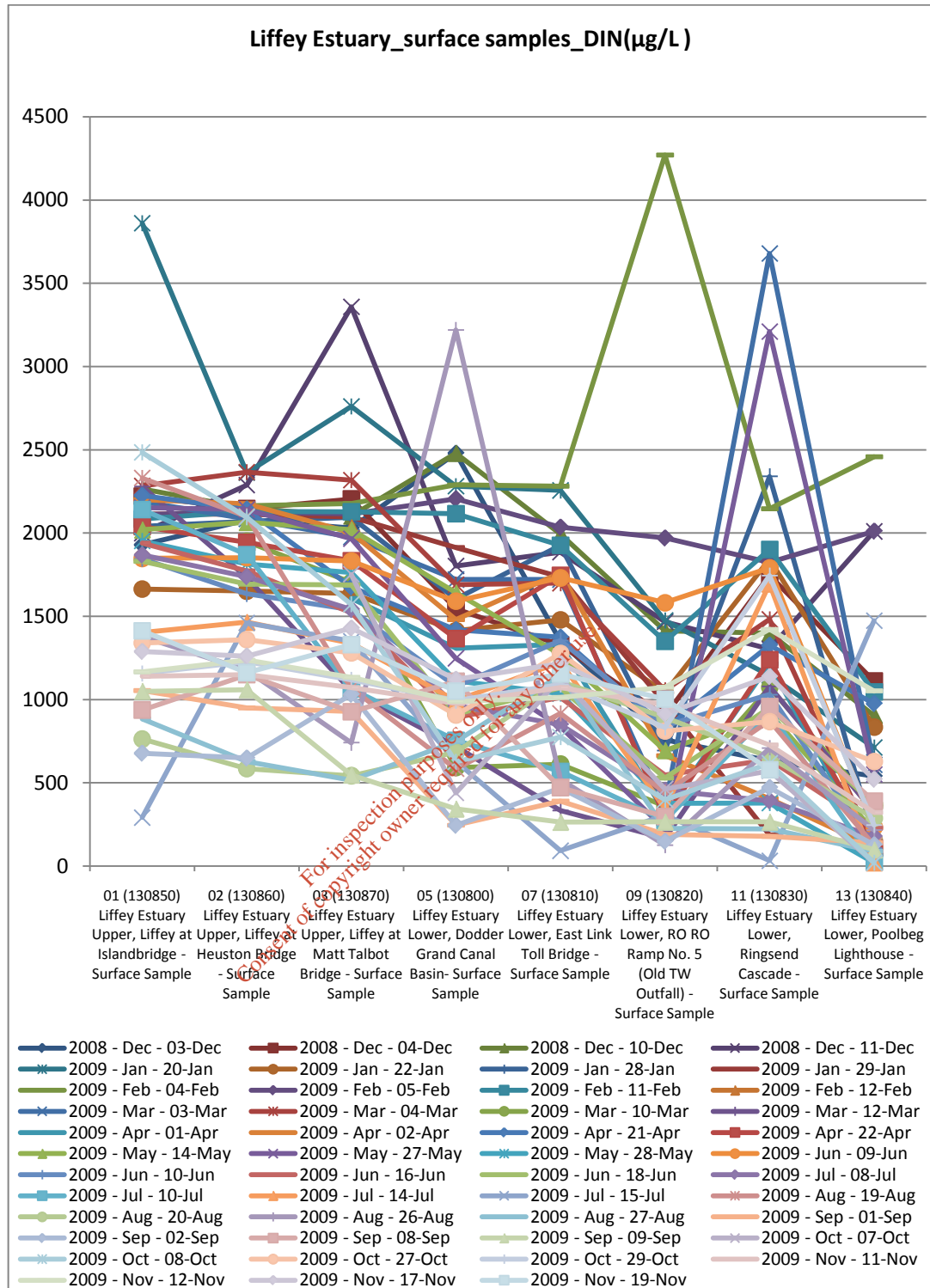


Figure 3.3 Liffey Estuary surface samples

Figure 3.4 shows general trend of elevated readings on the bottom at Grand Canal Dock station (130800) and downstream from Ringsend WwTW outfall at 130830. The line with the highest readings across all stations is associated with February rainfall.

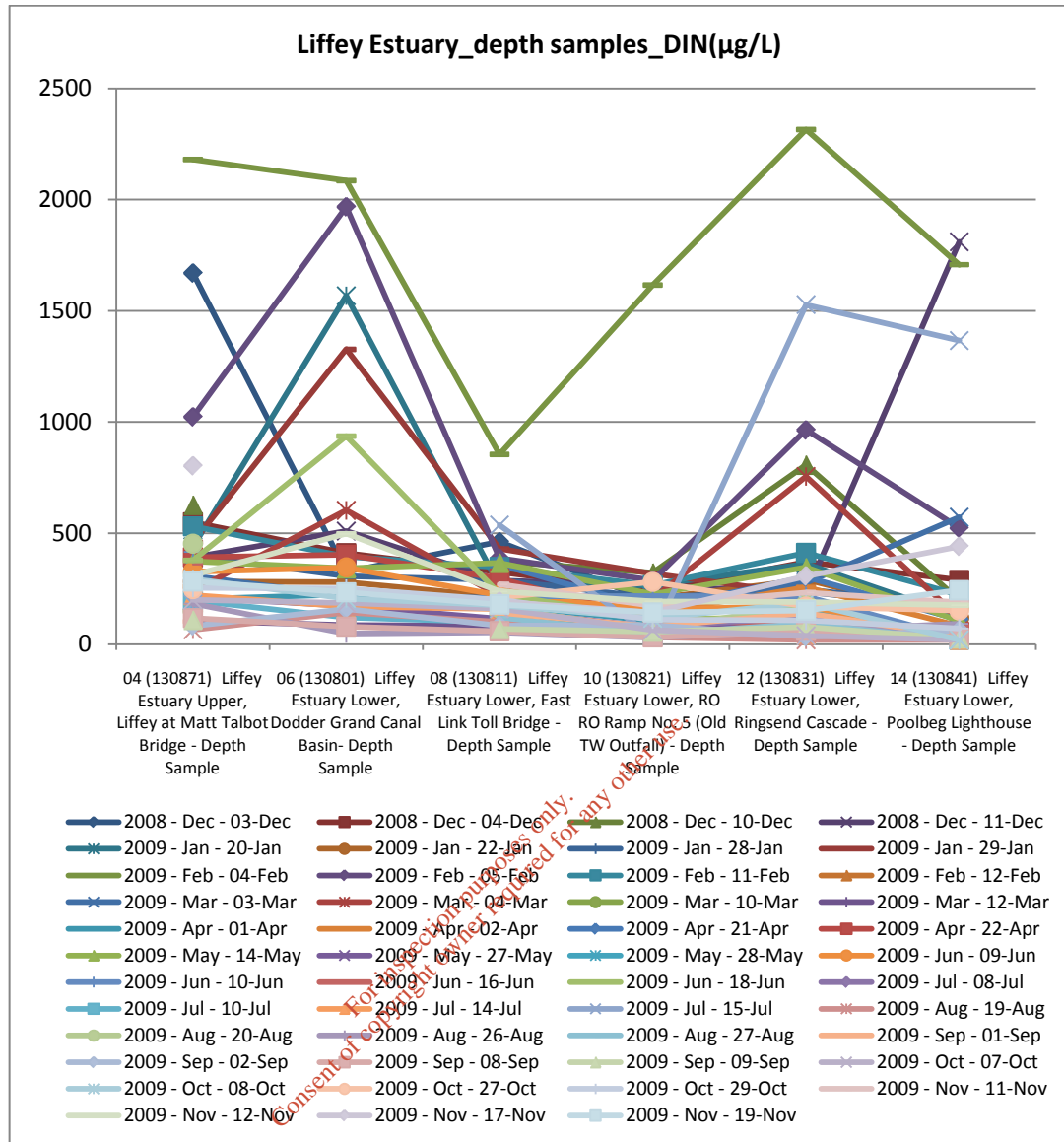


Figure 3.4 Liffey Estuary depth samples

Figures 3.5 and 3.6 present the DIN concentrations for the Tolka estuary. As in the Liffey estuary elevated DIN concentrations are evident with increasing concentrations further upstream. Surface results in normal conditions vary from 1000-2000µg/L at Drumcondra Bridge (130880) to 100-600µg/L at Wooden Bridge (130930) in Clontarf. Most of the high readings outside these brackets were caused by rainfalls.

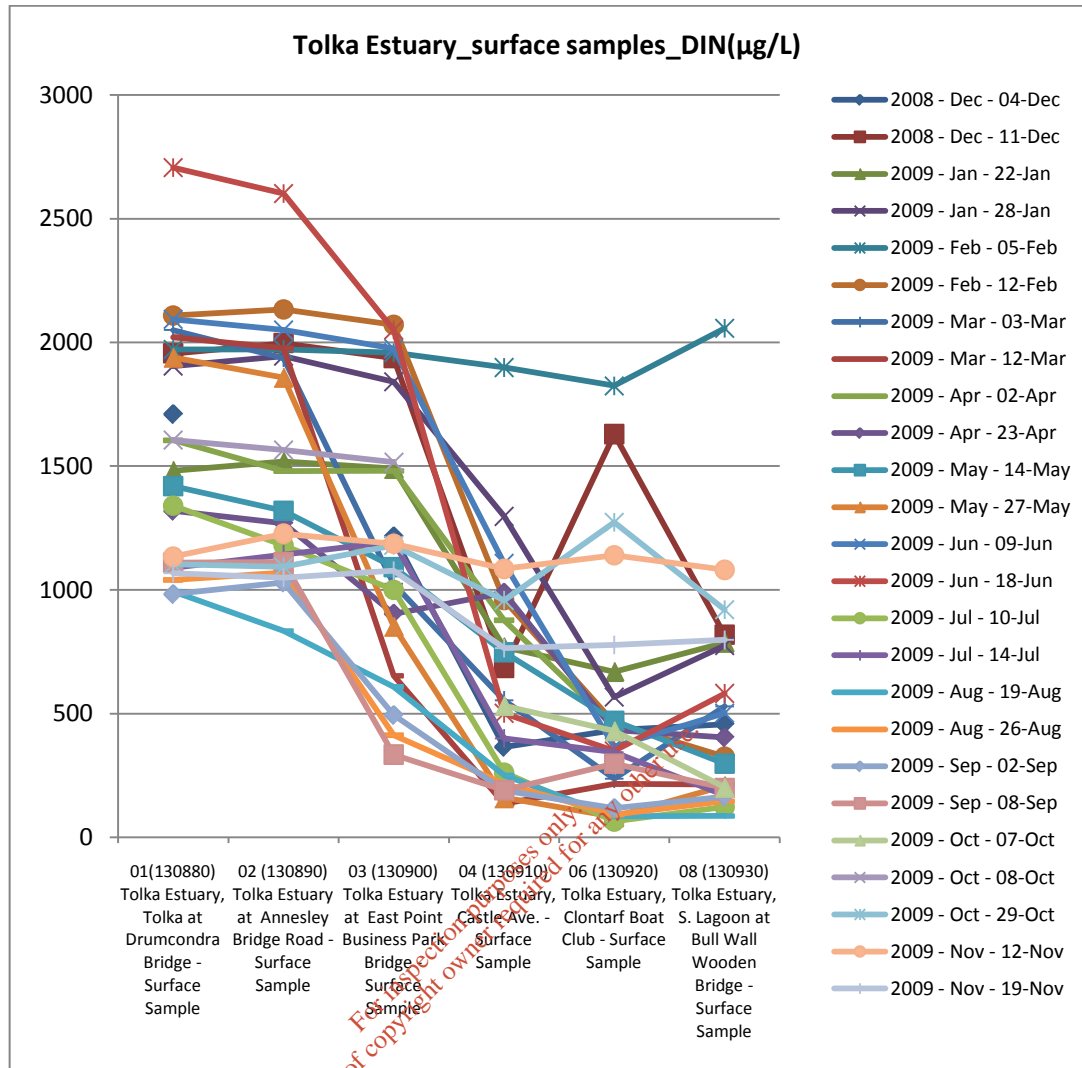


Figure 3.5 Tolka Estuary surface samples

Figure 3.6 shows only results from three stations. Samples from Tolka Estuary were taken only during high tide periods when there was sufficient amount of water to access this part of estuary by boat. All depth samples were taken from depth of 1.5 to 3 meters depending on type of tide.

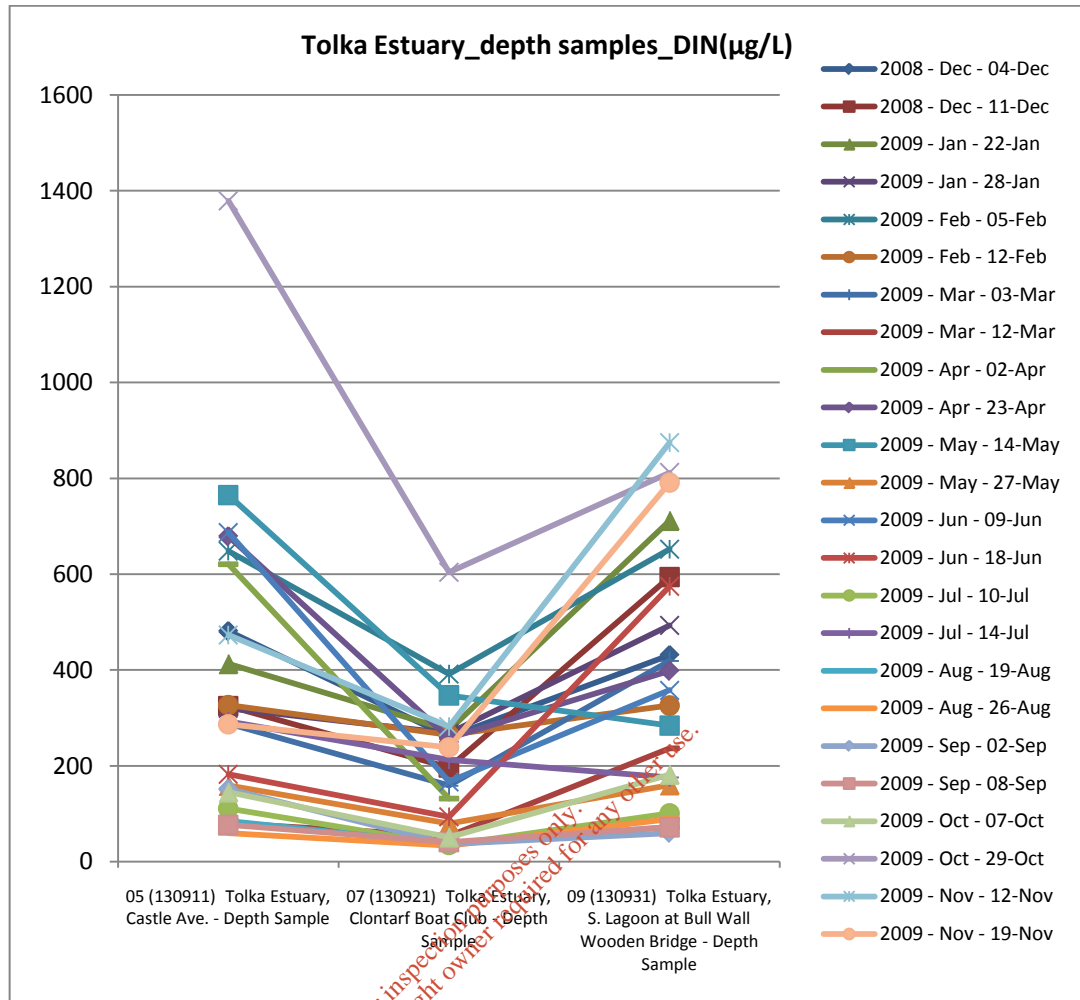


Figure 3.6 Tolka Estuary depth samples

In summary the DIN concentrations in the bay are generally at levels below the EQS requirement for Good Status. However, during extreme rainfall events the discharge from the estuaries and other onshore sources causes occasional concentration elevations. On one occasion large parts of the surface waters of the bay displayed levels in excess of the EQS requirements.

3.2. Molybdate Reactive Phosphorus

Figure 3.7 presents the Molybdate Reactive Phosphorus (MRP) 1m above the seabed in Dublin Bay. Most of the results prove good water quality with readings below EQS of 40µg/L for MRP. There are four events partially breaching the limit. Two were caused by rainfall from 5th February and 15th July. Non rain events consist of two peaks on the south side of the bay in 4th March and two peaks on the north side in 29th September.

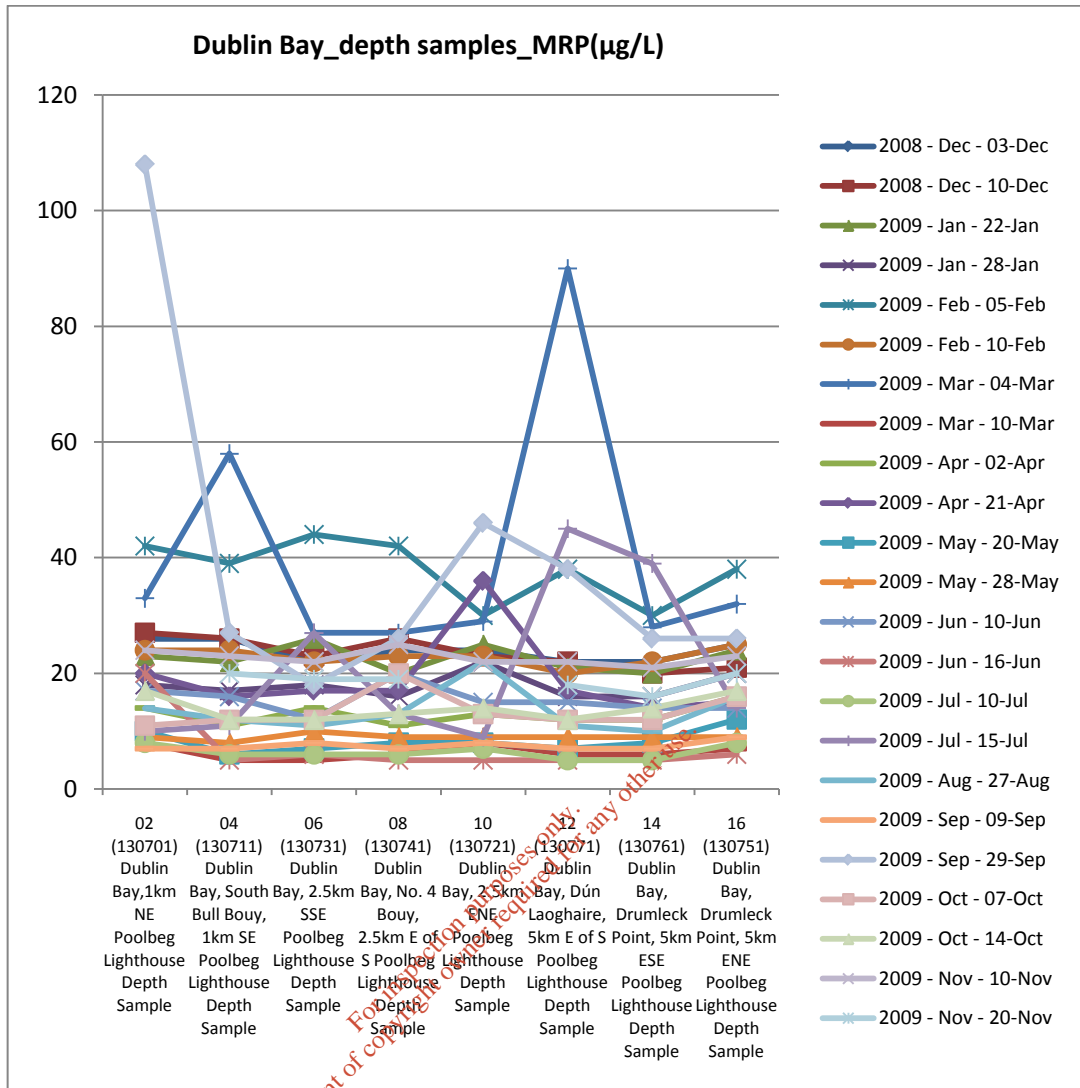


Figure 3.7 Dublin Bay depth samples

Next Figure 3.8 presents data from Dublin Bay from surface readings. Again most of the results fall below EQS standard but there are about five events when the limit was breached. Only two of them can be explained with rainfall – 5th February and 15th July. There is an interesting spike of MRP from 14th October with similar results in DIN – that day only this site had elevated readings.

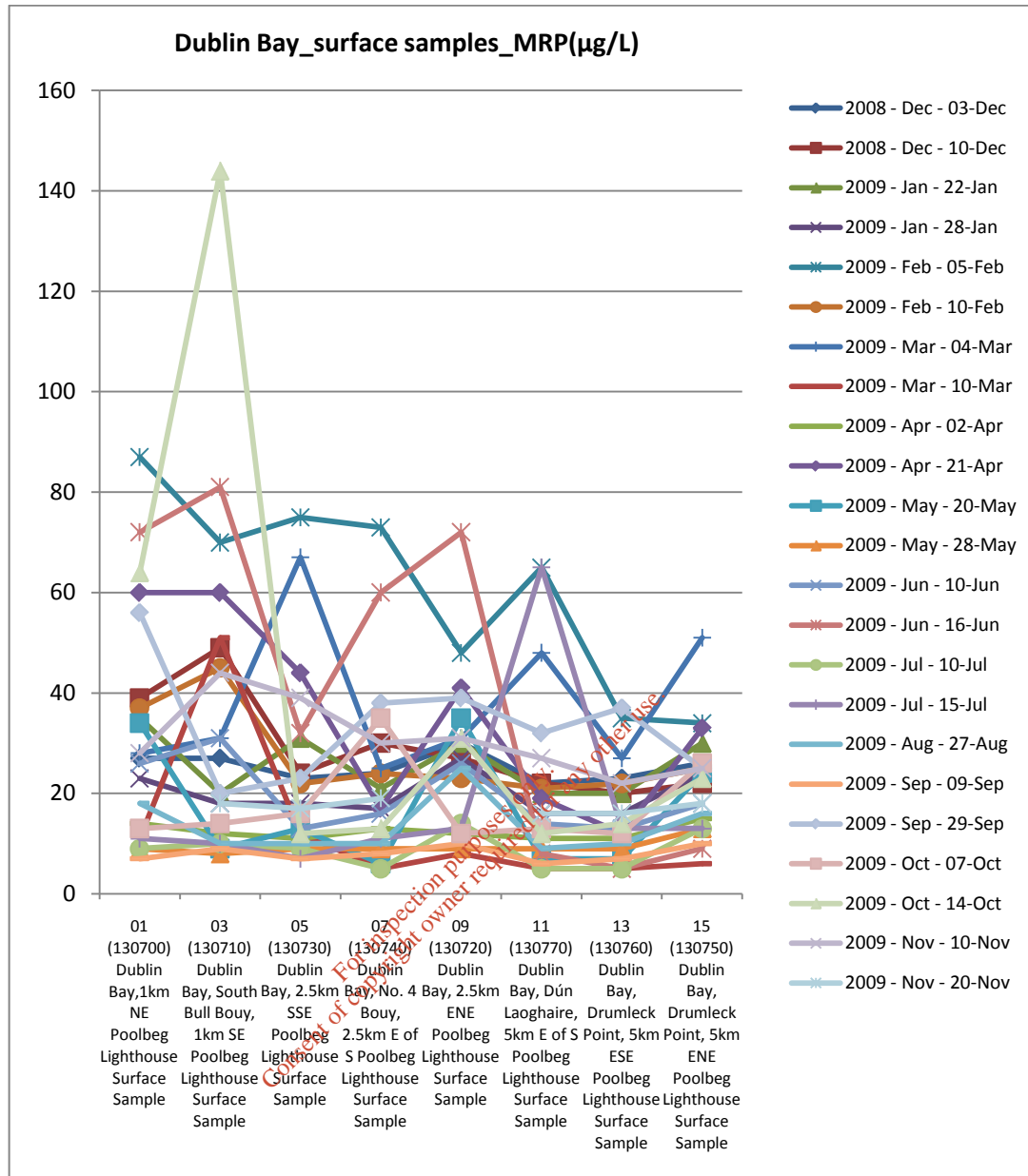


Figure 3.8 Dublin Bay surface samples

Figure 3.9 presents the depth readings from Liffey Estuary between Matt Talbot Bridge and the Poolbeg Lighthouse. The concentrations of MRP are generally within the range 0 - 75µg/l, but with some elevated levels especially at the Ringsend Cascade. However, the EQS values for transitional waters are breached throughout the entire reach on several occasions. These are samples from 4th February, 14th May and 15th July – all taken after heavier rainfalls.

During the project depth samples at Grand Canal Dock station (130801) were taken only during high tides when there was deep enough to do so. During low tide visits this site was sampled only at the surface – site not deeper than 1.5m during low water. This is the reason why site 130801 lacks half of the results on the graph.

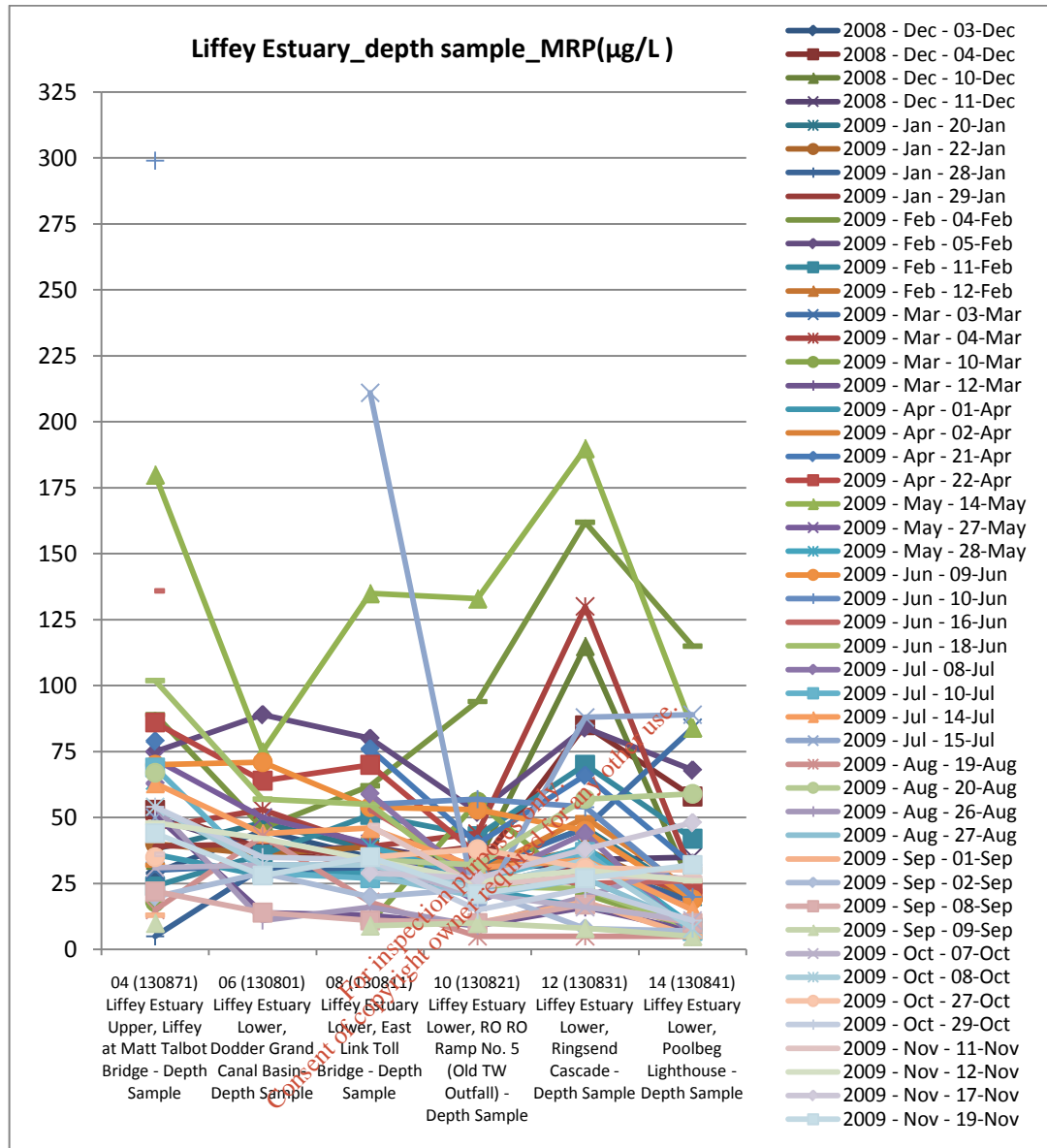


Figure 3.9 Liffey Estuary depth samples

Figure 3.10 shows the MRP concentrations for the surface water samples between the tidal limit at Islandbridge and the Poolbeg Lighthouse, Islandbridge sample being the only fresh water sample so EQS for fresh water apply to this station. The impact of the Ringsend Discharge is very apparent with concentrations typically in the range of 100 - 450µg/L. However, concentrations upstream consistently breach the EQS levels of 40 or 60µg/L (depending on salinity). Rainfall from 4th February and 14th May caused higher readings at 130800 by surface runoff carried by Dodder and one peak at 130820 from 4th February caused by overflowing storm tanks from Ringsend WwTW – again caused by the rainfall.

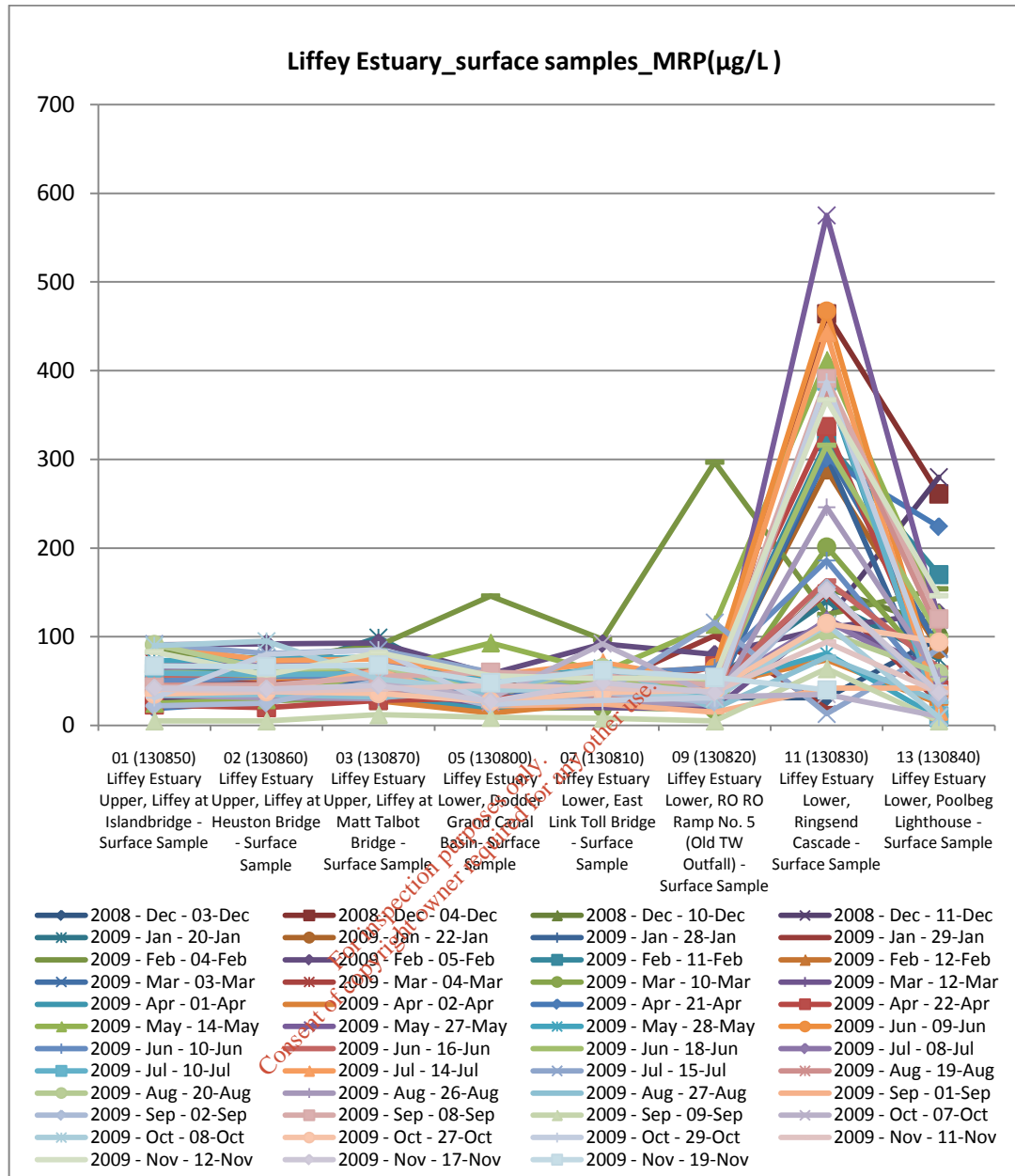


Figure 3.10 Liffey Estuary surface samples

Figures 3.11 and 3.12 present the MRP concentrations for the Tolka estuary. As in the Liffey estuary elevated MRP concentrations are evident throughout the estuary and often in excess of the EQS.

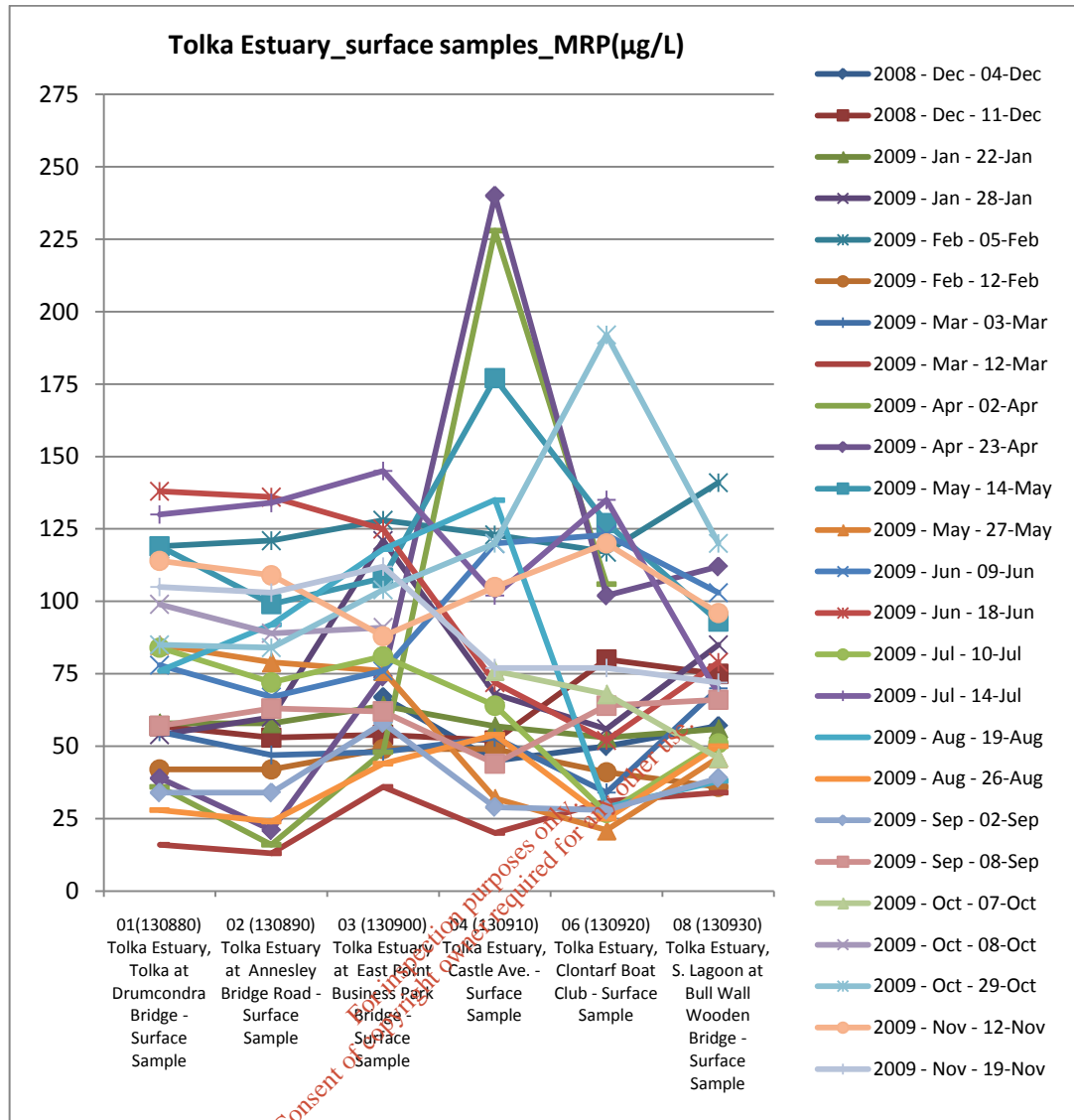


Figure 3.11 Tolka Estuary surface samples

Similar to DIN results Figure 3.12 presents only three stations sampled at the seabed.

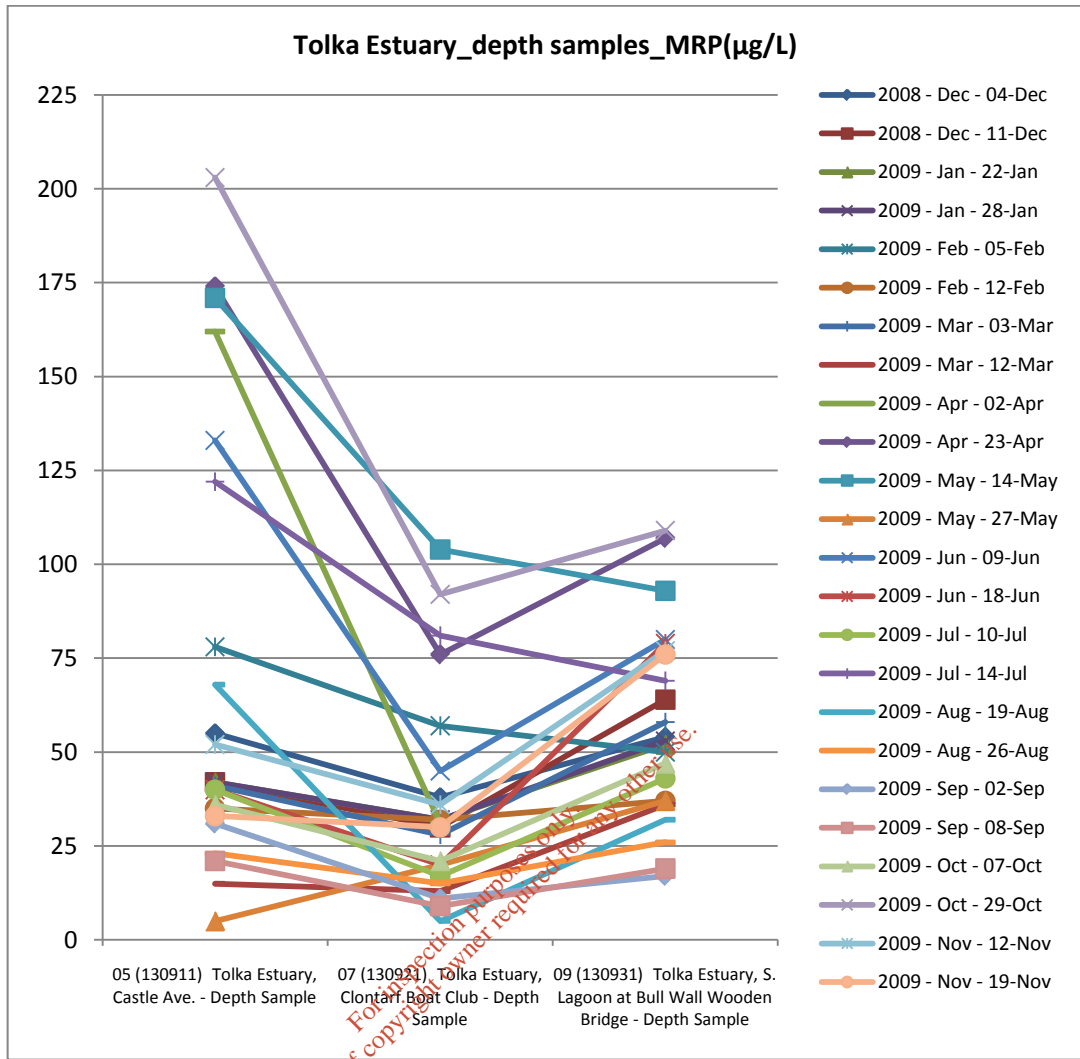


Figure 3.12 Tolka Estuary depth samples

In summary the MRP concentrations in the estuaries are often at levels in excess of the EQS requirement for Good Status. The Ringsend WwTW has a significant impact on water close to the works, but concentrations are elevated throughout both estuaries. The levels vary between each survey period but no other significant point sources are evident.

4. Appendix A – Lab reports

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Sampling Point	(130700) Dublin Bay, 1km NE Poolbeg Lighthouse - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 13:26	03/12/2008 16:41	191844	<10	<2	0.5	97	11.4	<0.1	27	33.7	0.62	7.7	161
10/12/2008 10:59	10/12/2008 15:01	195159	59	<2	0.3	98	12.0	0.5	39	30.3	0.12	6.5	328
22/01/2009 12:52	23/01/2009 08:24	208342	59	<2	<0.1	100	11.6	0.7	35	31.2	1.06	7.3	273
28/01/2009 09:39	29/01/2009 08:41	210611	93	<2	0.5	98	11.8	0.2	23	33.2	0.58	7.3	105
05/02/2009 11:33	05/02/2009 14:39	213855	319	<2	0.3	97	12.2	0.6	87	20.7	3.80	4.5	974
10/02/2009 14:03	11/02/2009 09:35	215406	142	<2	0.1	97	12.0	0.7	37	29.4	2.02	5.6	290
04/03/2009 13:28	05/03/2009 09:35	226266	31	<2	<0.1	105	12.4	1.3	28	32.8	0.62	6.3	96
10/03/2009 12:58	11/03/2009 09:11	229134	<10	<2	1.2	102	12.3	0.2	11	33.4	0.20	6.9	28
02/04/2009 14:16	02/04/2009 10:00	239012	<10	<2	0.4	100	11.8	0.2	14	32.9	0.26	8.3	61
21/04/2009 13:30	22/04/2009 08:23	246162	84	<2	3.2	102	11.2	0.6	60	30.9	0.28	11.4	255
20/05/2009 16:29	21/05/2009 10:31	258828	28	<2	1.5	105	11.5	0.8	34	32.5	0.21	11.2	75
28/05/2009 13:18	29/05/2009 08:31	263500	<10	<2	0.5	98	10.6	0.8	9	33.8	<0.10	12.0	<10
10/06/2009 13:25	11/06/2009 08:48	269219	23	<2	2.0	N.R.	N.R.	0.4	26	32.2	0.16	14.2	53
16/06/2009 11:27	17/06/2009 08:41	271620	50	<2	3.6	123	12.2	1.3	72	31.1	0.14	16.1	207
10/07/2009 11:33	10/07/2009 08:55	281537	<10	<2	1.9	108	11.1	0.4	9	34.1	<0.10	14.3	18
15/07/2009 16:34	16/07/2009 10:11	283910	<10	<2	2.4	111	11.1	0.5	11	33.8	<0.10	15.4	<10
27/08/2009 13:37	28/08/2009 08:40	302501	<10	<2	1.9	100	9.9	1.3	18	32.7	<0.10	15.2	24
09/09/2009 12:34	10/09/2009 08:49	307187	<10	<2	<0.1	99	10.1	1.7	7	34.9	<0.10	14.5	10
29/09/2009 13:40	30/09/2009 08:54	315519	199	<2	<0.1	102	10.4	1.3	56	32.5	0.13	14.6	10
07/10/2009 11:51	08/10/2009 08:51	320400	<10	<2	1.1	111	11.2	1.4	13	33.0	<0.10	13.4	<10
14/10/2009 12:06	14/10/2009 14:24	324006	94	<2	1.2	102	10.8	0.3	64	31.1	0.46	13.8	273
10/11/2009 14:53	11/11/2009 09:10	336473	14	<2	0.4	97	10.6	<0.1	28	32.0	0.40	11.2	158

N.R.= No result

This site was not sampled on the following dates: 19/08/09 and 20/11/09.

Sampling Point	(130701) Dublin Bay, 1km NE Poolbeg Lighthouse - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 13:27	03/12/2008 16:41	191845	10	<2	0.7	N.R.	N.R.	<0.1	26	33.7	0.62	7.8	149
10/12/2008 11:01	10/12/2008 15:01	195160	38	<2	0.4	102	12.6	0.3	27	32.7	0.72	6.6	201
22/01/2009 12:53	23/01/2009 08:24	208343	20	<2	0.1	98	11.3	1.1	23	33.5	0.49	7.7	134
28/01/2009 09:45	29/01/2009 08:42	210612	73	<2	0.1	96	11.5	0.4	18	33.4	0.44	7.5	93
05/02/2009 11:34	05/02/2009 14:39	213856	122	<2	0.3	98	11.7	0.4	42	33.2	0.58	6.3	164
10/02/2009 14:04	11/02/2009 09:36	215407	45	<2	0.1	96	11.8	1.1	24	32.3	0.65	5.7	124
04/03/2009 13:29	05/03/2009 09:35	226265	27	<2	<0.1	103	12.2	1.7	33	32.9	0.61	6.5	91
10/03/2009 12:59	11/03/2009 09:11	229135	<10	<2	1.6	101	12.1	<0.1	8	33.4	0.16	6.9	25
02/04/2009 14:17	02/04/2009 10:00	239013	<10	<2	0.1	99	11.7	0.4	14	32.9	0.26	8.2	62
21/04/2009 13:32	22/04/2009 08:23	246163	11	<2	7.3	98	11.2	0.3	20	32.8	N.R.	9.9	74
20/05/2009 16:30	21/05/2009 10:31	258829	<10	<2	0.9	106	11.7	3.3	10	33.3	<0.10	10.7	<10
28/05/2009 13:19	29/05/2009 08:31	263501	<10	<2	0.9	97	10.6	0.4	9	33.8	<0.10	11.8	<10
10/06/2009 13:27	11/06/2009 08:48	269220	17	<2	2.3	N.R.	N.R.	0.6	17	33.2	<0.10	13.5	<10
16/06/2009 11:28	17/06/2009 08:41	271621	<10	<2	1.6	106	10.9	0.4	10	33.3	<0.10	14.4	21
10/07/2009 11:35	10/07/2009 08:55	281538	<10	<2	2.0	106	10.9	0.8	8	34.0	<0.10	14.5	<10
15/07/2009 16:35	16/07/2009 10:12	283911	<10	<2	1.9	110	11.0	0.4	10	34.0	<0.10	15.1	<10
27/08/2009 13:38	28/08/2009 08:40	302502	<10	<2	2.3	100	9.8	1.4	14	32.7	0.13	15.2	21
09/09/2009 12:36	10/09/2009 08:49	307188	<10	<2	<0.1	97	9.9	2.4	7	34.9	<0.10	14.5	10
29/09/2009 13:41	30/09/2009 08:54	315520	106	<2	0.5	102	10.4	1.2	108	33.0	<0.10	14.5	135
07/10/2009 11:49	08/10/2009 08:52	320401	<10	<2	1.1	110	11.1	1.1	11	33.1	<0.10	13.3	<10
14/10/2009 12:07	14/10/2009 14:24	324007	<10	<2	1.3	101	10.8	1.0	17	33.0	<0.10	13.5	22
10/11/2009 14:54	11/11/2009 09:10	336474	<10	<2	0.4	96	10.4	<0.1	24	32.8	0.27	11.3	115

N.R.= No result

This site was not sampled on the following dates: 19/08/09 and 20/11/09.

Sampling Point	(130710) Dublin Bay, South Bull Bouy, 1km SE Poolbeg Lighthouse - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 14:50	03/12/2008 16:41	191846	<10	<2	<0.1	98	11.5	0.6	27	33.7	0.90	7.5	156
10/12/2008 12:40	10/12/2008 15:01	195173	67	<2	<0.1	97	11.8	1.5	49	31.7	0.78	7.1	309
22/01/2009 14:35	23/01/2009 08:24	208344	<10	<2	0.1	99	11.5	0.7	20	33.5	0.43	7.5	112
28/01/2009 10:34	29/01/2009 08:42	210613	68	<2	0.9	98	11.6	<0.1	18	33.5	0.42	7.6	89
05/02/2009 13:00	05/02/2009 14:39	213857	238	<2	0.1	98	12.2	0.3	70	28.0	3.16	4.9	414
10/02/2009 13:03	11/02/2009 09:36	215408	227	<2	0.4	97	11.7	0.3	45	30.2	0.99	7.1	209
04/03/2009 12:50	05/03/2009 09:35	226276	23	<2	0.3	105	12.4	0.9	31	33.0	0.60	6.5	94
10/03/2009 12:00	11/03/2009 09:11	229136	216	<2	0.7	102	12.1	0.2	51	30.7	0.41	7.9	84
02/04/2009 12:48	02/04/2009 10:00	239014	<10	<2	0.7	100	11.7	<0.1	12	32.8	0.24	8.5	56
21/04/2009 12:07	22/04/2009 08:23	246164	87	<2	3.5	100	11.0	<0.1	60	31.4	0.20	11.1	192
20/05/2009 15:14	21/05/2009 10:31	258830	<10	<2	0.8	108	11.9	0.2	9	33.1	<0.10	10.7	10
28/05/2009 12:07	29/05/2009 08:31	263502	<10	<2	0.5	98	10.5	0.8	8	33.4	<0.10	12.4	<10
10/06/2009 11:48	11/06/2009 08:48	269221	34	<2	1.2	100	10.1	0.8	31	31.7	0.22	14.2	79
16/06/2009 10:11	17/06/2009 08:41	271622	92	<2	2.5	105	10.7	0.7	81	32.2	0.51	15.0	289
10/07/2009 10:11	10/07/2009 08:55	281539	<10	<2	2.0	107	10.9	0.6	10	33.4	<0.10	14.7	17
15/07/2009 14:37	16/07/2009 10:12	283912	11	<2	1.9	110	10.9	0.8	10	33.9	<0.10	15.5	<10
27/08/2009 12:12	28/08/2009 08:40	302503	<10	<2	1.5	100	9.9	1.0	10	32.7	0.12	15.3	18
09/09/2009 11:04	10/09/2009 08:49	307189	14	<2	0.9	96	9.9	1.1	9	34.8	0.12	14.8	27
29/09/2009 11:48	30/09/2009 08:54	315521	58	<2	3.7	100	10.2	<0.1	20	32.8	<0.10	14.7	260
07/10/2009 10:47	08/10/2009 08:52	320402	11	<2	0.3	112	11.2	2.3	14	33.0	<0.10	13.3	<10
14/10/2009 11:16	14/10/2009 14:24	324008	327	<2	0.7	102	10.6	1.1	144	31.9	0.56	14.1	493
10/11/2009 13:52	11/11/2009 09:10	336475	35	<2	0.3	97	10.7	0.2	44	30.9	0.58	11.2	230
20/11/2009 10:00	20/11/2009 12:59	341424	10	<2	0.1	101	10.7	0.3	18	33.1	0.19	11.6	81

This site was not sampled on 19/08/09.

Sampling Point	(130711) Dublin Bay, South Bull Bouy, 1km SE Poolbeg Lighthouse - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 14:52	03/12/2008 16:41	191847	13	<2	0.3	N.R.	N.R.	0.5	26	33.8	0.76	7.4	152
10/12/2008 12:42	10/12/2008 15:01	195174	24	<2	0.5	106	12.8	0.2	26	33.0	0.50	7.1	193
22/01/2009 14:37	23/01/2009 08:24	208345	10	<2	0.1	99	11.4	0.7	22	33.5	0.46	7.5	132
28/01/2009 10:37	29/01/2009 08:42	210614	68	<2	2.4	96	11.5	<0.1	17	33.5	0.42	7.6	95
05/02/2009 13:01	05/02/2009 14:39	213858	86	<2	0.3	98	11.8	0.7	39	33.3	0.41	6.4	94
10/02/2009 13:05	11/02/2009 09:36	215409	40	<2	0.7	96	11.8	0.8	24	32.4	0.65	6.1	123
04/03/2009 12:52	05/03/2009 09:35	226275	33	<2	0.1	103	12.2	0.5	58	32.8	0.62	6.6	100
10/03/2009 12:02	11/03/2009 09:11	229137	<10	<2	0.5	100	12.1	0.4	5	33.3	0.18	7.0	32
02/04/2009 12:50	02/04/2009 10:00	239015	<10	<2	0.4	99	11.7	0.3	11	32.9	0.25	8.2	55
21/04/2009 12:09	22/04/2009 08:23	246165	<10	<2	0.5	99	11.3	0.6	16	32.7	0.61	9.8	51
20/05/2009 15:16	21/05/2009 10:31	258831	<10	<2	2.0	108	12.0	0.5	6	33.4	<0.10	10.6	<10
28/05/2009 12:09	29/05/2009 08:31	263503	<10	<2	1.1	97	10.6	0.1	8	33.6	<0.10	11.8	<10
10/06/2009 11:50	11/06/2009 08:48	269222	13	<2	1.7	95	9.8	0.8	16	33.3	<0.10	13.5	<10
16/06/2009 10:13	17/06/2009 08:41	271623	<10	<2	1.2	105	10.9	0.3	5	33.3	N.R.	14.1	10
10/07/2009 10:14	10/07/2009 08:55	281540	<10	<2	1.5	105	10.8	0.3	6	33.6	<0.10	14.4	10
15/07/2009 14:40	16/07/2009 10:12	283913	<10	<2	1.5	110	11.0	0.7	11	34.0	<0.10	14.8	<10
27/08/2009 12:14	28/08/2009 08:40	302504	<10	<2	2.1	99	9.8	0.5	12	32.8	0.12	15.2	19
09/09/2009 11:05	10/09/2009 08:49	307190	10	<2	1.6	96	9.9	<0.1	7	34.8	<0.10	14.6	12
29/09/2009 11:50	30/09/2009 08:54	315522	32	<2	<0.1	100	10.3	1.5	27	33.2	<0.10	14.4	138
07/10/2009 10:45	08/10/2009 08:52	320403	16	<2	0.8	111	11.1	1.0	12	33.0	<0.10	13.2	<10
14/10/2009 11:19	14/10/2009 14:24	324009	<10	<2	0.9	102	10.8	0.5	12	33.0	<0.10	13.5	<10
10/11/2009 13:54	11/11/2009 09:10	336476	<10	<2	0.3	96	10.5	0.1	23	32.8	0.26	11.4	110
20/11/2009 10:00	20/11/2009 12:59	341425	11	<2	0.3	100	10.6	0.8	20	33.1	0.20	11.7	82
N.R.= No result													
This site was not sampled on 19/08/09.													

Sampling Point	(130720) Dublin Bay, 2.5km ENE Poolbeg Lighthouse - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 13:35	03/12/2008 16:41	191850	16	<2	0.8	97	11.4	<0.1	30	33.5	0.78	7.7	173
10/12/2008 11:09	10/12/2008 15:01	195161	25	<2	0.4	97	11.8	0.6	27	33.0	0.78	7.1	180
22/01/2009 13:02	23/01/2009 08:24	208346	56	<2	0.1	100	11.6	0.8	30	32.3	0.68	7.2	212
28/01/2009 09:52	29/01/2009 08:42	210615	109	<2	0.3	98	11.7	0.2	27	32.6	0.57	7.3	118
05/02/2009 11:45	05/02/2009 14:39	213859	133	<2	0.4	98	11.8	0.5	48	33.0	0.40	6.1	132
10/02/2009 14:12	11/02/2009 09:36	215410	36	<2	0.7	97	11.9	0.5	23	32.2	0.65	5.9	118
04/03/2009 13:33	05/03/2009 09:35	226264	40	<2	0.3	104	12.3	0.2	31	32.7	0.64	6.5	101
10/03/2009 12:53	11/03/2009 09:11	229138	<10	<2	0.9	102	12.3	0.4	8	33.2	0.21	6.9	34
02/04/2009 14:05	02/04/2009 10:00	239016	<10	<2	0.7	99	11.7	0.5	12	33.0	0.25	8.2	55
21/04/2009 13:18	22/04/2009 08:23	246166	46	<2	1.9	101	11.2	1.9	41	31.6	0.21	10.9	153
20/05/2009 16:20	21/05/2009 10:31	258832	33	<2	1.6	104	11.4	0.4	35	31.5	0.27	11.3	89
28/05/2009 13:09	29/05/2009 08:31	263504	<10	<2	0.1	99	10.7	0.6	9	33.8	N.R.	12.3	<10
10/06/2009 13:08	11/06/2009 08:48	269223	24	<2	0.5	N.R.	N.R.	0.5	26	32.5	0.14	14.1	50
16/06/2009 11:17	17/06/2009 08:41	271624	60	<2	4.1	110	10.9	1.7	72	30.4	0.37	16.0	258
10/07/2009 11:24	10/07/2009 08:55	281541	<10	<2	2.0	108	11.1	0.7	14	33.5	<0.10	14.3	20
15/07/2009 16:18	16/07/2009 10:12	283914	11	<2	<0.1	111	11.1	2.5	13	33.6	<0.10	15.2	<10
27/08/2009 13:29	28/08/2009 08:40	302505	31	<2	2.1	101	10.0	1.1	25	32.5	0.12	15.3	43
09/09/2009 12:25	10/09/2009 08:49	307191	11	<2	1.6	99	10.2	0.5	10	34.1	<0.10	14.6	19
29/09/2009 13:26	30/09/2009 08:54	315523	54	<2	<0.1	102	10.5	0.8	39	33.0	<0.10	14.6	35
07/10/2009 11:44	08/10/2009 08:52	320404	14	<2	1.3	112	11.2	1.7	12	33.0	<0.10	13.4	<10
14/10/2009 12:00	14/10/2009 14:24	324010	27	<2	1.5	104	11.1	1.6	31	32.6	<0.10	13.5	88
10/11/2009 14:46	11/11/2009 09:10	336477	15	<2	0.8	97	10.6	0.6	31	31.9	0.43	11.3	165
N.R.= No result													
This site was not sampled on the following dates: 19/08/09 and 20/11/09.													

(130721) Dublin Bay, 2.5km ENE Poolbeg Lighthouse - Depth Sample													
Sampling Point	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
Sampled Date			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 13:37	03/12/2008 16:38	191830	11	<2	0.6	N.R.	N.R.	0.3	24	33.8	0.70	7.6	148
10/12/2008 11:11	10/12/2008 15:01	195162	17	<2	0.4	109	13.2	0.3	23	33.2	0.76	7.2	155
22/01/2009 13:04	23/01/2009 08:24	208347	24	<2	0.1	99	11.4	1.0	25	33.1	0.53	7.4	155
28/01/2009 11:13	29/01/2009 08:42	210616	80	<2	0.3	96	11.4	0.3	22	33.4	0.47	7.6	101
05/02/2009 11:43	05/02/2009 14:39	213860	115	<2	0.5	97	11.9	0.3	30	32.4	0.35	5.3	98
10/02/2009 14:13	11/02/2009 09:36	215411	35	<2	0.4	96	11.8	0.7	23	32.3	0.66	5.8	120
04/03/2009 13:34	05/03/2009 09:35	226263	25	<2	0.3	103	12.1	0.6	29	32.8	0.61	6.7	90
10/03/2009 12:54	11/03/2009 09:11	229139	<10	<2	0.7	100	12.1	0.5	8	33.4	0.16	6.9	24
02/04/2009 14:08	02/04/2009 10:00	239017	<10	<2	0.4	98	11.6	0.5	13	33.0	0.26	8.1	60
21/04/2009 13:21	22/04/2009 08:23	246167	11	<2	2.8	101	11.5	2.0	36	32.7	0.13	10.0	72
20/05/2009 16:22	21/05/2009 10:31	258833	<10	<2	<0.1	105	11.6	2.5	8	33.3	<0.10	10.6	<10
28/05/2009 13:10	29/05/2009 08:31	263505	<10	<2	0.8	97	10.7	0.2	9	33.7	<0.10	11.7	<10
10/06/2009 13:18	11/06/2009 08:48	269224	14	<2	1.2	N.R.	N.R.	1.3	15	33.4	<0.10	13.5	<10
16/06/2009 11:19	17/06/2009 08:41	271625	<10	<2	2.0	106	10.9	1.1	5	33.4	<0.10	14.3	11
10/07/2009 11:26	10/07/2009 08:55	281542	<10	<2	1.4	105	10.8	1.0	7	33.6	<0.10	14.4	<10
15/07/2009 16:20	16/07/2009 10:12	283915	12	<2	2.3	108	11.0	<0.1	9	34.1	<0.10	14.6	<10
27/08/2009 13:31	28/08/2009 08:40	302506	16	<2	1.2	99	9.8	1.8	22	32.6	0.18	15.3	44
09/09/2009 12:27	10/09/2009 08:49	307192	11	<2	0.8	95	9.8	1.3	8	34.4	<0.10	14.5	12
29/09/2009 13:28	30/09/2009 08:54	315524	71	<2	0.7	102	10.4	0.6	46	33.1	<0.10	14.5	82
07/10/2009 11:43	08/10/2009 08:52	320405	17	<2	1.2	112	11.3	0.9	13	33.1	<0.10	13.3	<10
14/10/2009 12:01	14/10/2009 14:24	324011	<10	<2	1.2	102	10.8	0.5	14	33.0	<0.10	13.4	13
10/11/2009 14:48	11/11/2009 09:10	336478	<10	<2	<0.1	95	10.3	1.5	22	32.9	0.25	11.6	101
N.R.= No result													
This site was not sampled on the following dates: 19/08/09 and 20/11/09.													

Sampling Point	(130730) Dublin Bay, 2.5km SSE Poolbeg Lighthouse - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 14:38	03/12/2008 17:03	191851	<10	<2	0.5	97	11.3	0.6	23	33.9	0.75	8.1	140
10/12/2008 12:30	10/12/2008 15:01	195171	19	<2	0.4	97	11.7	0.1	24	33.2	0.68	7.4	127
22/01/2009 14:20	23/01/2009 08:51	208348	61	<2	<0.1	100	11.5	0.8	31	33.0	0.58	7.6	169
28/01/2009 10:43	29/01/2009 08:42	210617	66	<2	0.3	98	11.6	0.4	18	33.6	0.41	7.6	90
05/02/2009 12:48	05/02/2009 14:39	213861	227	<2	0.5	98	12.1	0.5	75	26.1	2.35	5.2	554
10/02/2009 13:16	11/02/2009 09:36	215412	29	<2	0.7	95	11.7	0.4	22	32.4	0.61	5.8	112
04/03/2009 12:57	05/03/2009 09:35	226274	44	<2	0.4	106	12.4	0.7	67	32.8	0.61	6.6	88
10/03/2009 12:28	11/03/2009 09:11	229140	<10	<2	0.7	102	12.3	0.5	12	33.4	0.21	6.9	32
02/04/2009 13:42	02/04/2009 10:00	239018	<10	<2	0.9	99	11.7	0.3	11	33.0	0.23	8.2	53
21/04/2009 12:15	22/04/2009 08:23	246168	51	<2	0.6	100	11.2	1.2	44	31.7	0.12	10.6	184
20/05/2009 15:23	21/05/2009 10:31	258834	<10	<2	0.7	108	11.9	1.8	13	33.0	<0.10	10.7	18
28/05/2009 12:16	29/05/2009 08:31	263506	<10	<2	0.8	99	10.7	0.7	9	33.5	<0.10	12.1	<10
10/06/2009 11:57	11/06/2009 08:48	269225	<10	<2	1.6	97	10.0	0.4	13	33.5	<0.10	13.7	<10
16/06/2009 10:23	17/06/2009 08:41	271626	19	<2	4.0	111	11.2	1.5	32	32.2	0.22	15.2	87
10/07/2009 10:20	10/07/2009 08:55	281543	<10	<2	2.5	107	11.0	<0.1	9	33.6	<0.10	14.2	<10
15/07/2009 14:51	16/07/2009 10:12	283916	<10	<2	1.7	111	11.1	0.2	7	33.8	<0.10	15.3	<10
27/08/2009 12:22	28/08/2009 08:40	302507	<10	<2	1.7	100	10.0	1.3	10	32.8	0.13	15.1	14
09/09/2009 11:12	10/09/2009 08:49	307193	13	<2	0.5	98	10.1	1.8	7	34.8	0.16	14.5	37
29/09/2009 12:01	30/09/2009 08:54	315525	34	<2	0.3	100	10.4	0.9	23	33.2	<0.10	14.4	12
07/10/2009 11:00	08/10/2009 08:52	320406	13	<2	2.5	113	11.3	1.5	16	33.0	<0.10	13.5	<10
14/10/2009 11:23	14/10/2009 14:24	324012	<10	<2	0.9	104	11.0	0.7	12	33.0	<0.10	13.5	<10
10/11/2009 13:58	11/11/2009 09:10	336479	30	<2	<0.1	98	10.7	0.8	39	31.9	0.43	11.3	185
20/11/2009 10:00	20/11/2009 12:59	341426	<10	<2	0.1	101	10.6	0.5	17	33.2	0.19	11.6	82
This site was not sampled on 19/08/09.													

Sampling Point	(130731) Dublin Bay, 2.5km SSE Poolbeg Lighthouse - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 14:41	03/12/2008 17:04	191852	10	<2	0.7	N.R.	N.R.	0.4	22	34.0	0.67	7.9	139
10/12/2008 12:32	10/12/2008 15:01	195172	22	<2	0.4	N.R.	N.R.	0.4	23	33.1	0.54	7.4	141
22/01/2009 14:23	23/01/2009 08:51	208349	22	<2	0.1	98	11.2	1.1	26	33.5	0.45	7.8	161
28/01/2009 10:46	29/01/2009 08:42	210618	60	<2	0.7	96	11.4	<0.1	18	33.6	0.41	7.6	89
05/02/2009 12:50	05/02/2009 14:39	213862	89	<2	0.3	98	11.8	0.2	44	33.2	0.39	6.4	92
10/02/2009 13:15	11/02/2009 09:36	215413	27	<2	0.7	97	12.0	1.0	22	32.4	0.62	5.9	109
04/03/2009 12:58	05/03/2009 09:35	226273	23	<2	<0.1	103	12.1	1.3	27	32.8	0.61	6.7	91
10/03/2009 12:29	11/03/2009 09:11	229141	<10	<2	0.4	100	12.1	0.8	5	33.5	0.11	6.9	18
02/04/2009 13:43	02/04/2009 10:00	239019	<10	<2	1.2	98	11.6	0.5	14	33.0	0.24	8.1	55
21/04/2009 12:17	22/04/2009 08:23	246169	<10	<2	1.7	99	11.3	1.1	17	32.9	0.12	9.7	62
20/05/2009 15:25	21/05/2009 10:31	258835	<10	<2	2.0	106	11.8	0.9	7	33.4	<0.10	10.5	<10
28/05/2009 12:17	29/05/2009 08:31	263507	<10	<2	0.9	98	10.7	0.9	10	33.6	<0.10	11.7	<10
10/06/2009 11:58	11/06/2009 08:48	269226	11	<2	1.9	94	9.7	0.7	12	33.5	<0.10	13.6	<10
16/06/2009 10:24	17/06/2009 08:41	271627	<10	<2	0.8	103	10.6	1.3	6	33.4	<0.10	14.1	11
10/07/2009 10:23	10/07/2009 08:55	281544	<10	<2	1.9	105	10.8	0.6	6	34.1	<0.10	14.3	<10
15/07/2009 15:06	16/07/2009 10:12	283917	<10	<2	2.0	106	10.9	<0.1	27	34.0	<0.10	15.8	26
27/08/2009 12:27	28/08/2009 08:40	302508	<10	3	1.7	99	9.8	0.7	11	32.8	0.12	15.1	14
09/09/2009 11:14	10/09/2009 08:49	307194	10	<2	4.4	96	9.8	<0.1	8	34.8	<0.10	14.5	18
29/09/2009 12:03	30/09/2009 08:54	315526	22	<2	1.1	100	10.3	1.0	18	33.2	<0.10	14.3	57
07/10/2009 10:58	08/10/2009 08:52	320407	<10	<2	2.4	114	11.4	2.1	12	33.1	<0.10	13.4	<10
14/10/2009 11:24	14/10/2009 14:24	324013	<10	<2	1.9	103	10.8	1.0	12	33.0	<0.10	13.5	<10
10/11/2009 13:59	11/11/2009 09:10	336480	<10	<2	0.3	96	10.4	<0.1	22	32.9	0.26	11.6	104
20/11/2009 10:00	20/11/2009 12:59	341427	<10	<2	0.5	100	10.6	0.7	19	33.1	0.20	11.7	80
N.R.= No result													
This site was not sampled on 19/08/09.													

Sampling Point	(130740) Dublin Bay, No. 4 Bouy, 2.5km E of S Poolbeg Lighthouse - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 14:29	03/12/2008 17:04	191853	<10	<2	0.1	97	11.3	0.8	24	34.1	0.71	8.0	145
10/12/2008 12:00	10/12/2008 15:01	195167	45	<2	0.4	98	11.9	<0.1	30	32.8	0.72	6.9	211
22/01/2009 14:00	23/01/2009 08:51	208350	<10	<2	0.1	100	11.5	0.8	21	33.5	0.46	7.5	118
28/01/2009 10:25	29/01/2009 08:42	210619	59	<2	0.4	98	11.6	0.2	17	33.6	0.41	7.5	93
05/02/2009 12:38	05/02/2009 14:39	213863	215	<2	0.3	98	12.2	0.5	73	27.7	1.06	4.9	439
10/02/2009 13:00	11/02/2009 09:36	215414	33	<2	0.7	97	12.0	0.5	24	32.4	0.64	5.7	115
04/03/2009 13:20	05/03/2009 09:35	226268	21	<2	0.7	105	12.4	0.5	25	33.0	0.60	6.6	88
10/03/2009 12:06	11/03/2009 09:11	229142	<10	<2	0.5	101	12.2	0.4	5	33.3	0.15	6.9	19
02/04/2009 12:57	02/04/2009 10:00	239020	<10	<2	0.9	99	11.7	0.3	13	33.0	0.25	8.1	55
21/04/2009 12:25	22/04/2009 08:23	246170	<10	<2	1.6	100	11.3	0.5	17	32.9	0.12	9.9	53
20/05/2009 15:35	21/05/2009 10:31	258836	<10	<2	0.3	109	12.1	0.2	6	33.4	<0.10	10.5	<10
28/05/2009 12:24	29/05/2009 08:31	263508	<10	<2	0.8	98	10.7	0.5	9	33.6	<0.10	11.9	<10
10/06/2009 12:10	11/06/2009 08:48	269227	17	<2	1.1	99	10.1	0.5	16	33.2	<0.10	13.9	13
16/06/2009 10:34	17/06/2009 08:41	271628	60	<2	3.7	115	11.6	1.2	60	32.4	0.15	15.2	196
10/07/2009 10:33	10/07/2009 08:55	281545	<10	<2	1.1	106	10.9	0.8	<5	34.1	<0.10	14.2	<10
15/07/2009 15:13	16/07/2009 10:12	283918	<10	<2	1.3	109	11.0	0.1	11	34.1	<0.10	14.8	<10
27/08/2009 12:37	28/08/2009 08:40	302509	<10	<2	1.6	99	9.8	0.9	10	32.8	0.15	15.1	17
09/09/2009 11:24	10/09/2009 08:49	307195	<10	<2	2.4	98	10.0	<0.1	8	34.9	<0.10	14.4	22
29/09/2009 12:14	30/09/2009 08:54	315527	54	<2	0.3	101	10.4	0.5	38	33.3	<0.10	14.4	47
07/10/2009 11:08	08/10/2009 08:52	320408	33	<2	0.5	112	11.2	1.1	35	33.1	<0.10	13.6	18
14/10/2009 11:30	14/10/2009 14:24	324014	<10	<2	1.2	104	11.0	1.5	13	33.1	<0.10	13.4	<10
10/11/2009 14:06	11/11/2009 09:10	336481	20	<2	0.1	97	10.6	0.2	30	32.4	0.33	11.4	140
20/11/2009 10:00	20/11/2009 12:59	341428	11	<2	0.3	100	10.6	0.5	19	33.1	0.20	11.6	80
This site was not sampled on 19/08/09.													

Sampling Point	(130741) Dublin Bay, No. 4 Buoy, 2.5km E of S Poolbeg Lighthouse - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 14:31	03/12/2008 17:04	191854	16	<2	0.4	N.R.	N.R.	0.6	24	33.9	0.81	7.6	146
10/12/2008 12:02	10/12/2008 15:01	195168	29	<2	0.1	105	12.9	0.6	26	33.0	0.74	6.7	191
22/01/2009 14:01	23/01/2009 08:51	208351	<10	<2	<0.1	98	11.3	1.5	20	33.5	0.41	7.7	103
28/01/2009 10:28	29/01/2009 08:42	210620	53	<2	<0.1	96	11.4	0.6	16	33.5	0.41	7.5	89
05/02/2009 12:40	05/02/2009 14:39	213864	91	<2	0.3	98	11.7	0.9	42	33.3	0.39	6.4	88
10/02/2009 13:52	11/02/2009 09:36	215415	29	<2	0.9	95	11.8	1.8	23	32.5	0.63	5.8	111
04/03/2009 13:21	05/03/2009 09:35	226267	22	<2	0.5	104	12.2	0.2	27	32.9	0.60	6.7	88
10/03/2009 12:07	11/03/2009 09:11	229143	<10	<2	0.4	100	12.0	0.6	6	33.4	0.13	6.9	21
02/04/2009 12:59	02/04/2009 10:00	239021	<10	<2	0.7	98	11.7	0.4	11	33.0	0.25	8.0	55
21/04/2009 12:27	22/04/2009 08:23	246171	<10	<2	1.3	98	11.2	0.6	17	32.9	0.24	9.6	52
20/05/2009 15:36	21/05/2009 10:31	258837	<10	<2	3.3	109	12.0	<0.1	8	33.4	<0.10	10.4	<10
28/05/2009 12:25	29/05/2009 08:31	263509	<10	<2	0.7	97	10.6	0.3	9	33.7	<0.10	11.7	<10
10/06/2009 12:11	11/06/2009 08:48	269228	25	<2	0.9	94	9.7	0.3	20	33.4	<0.10	13.4	17
16/06/2009 10:36	17/06/2009 08:41	271629	<10	<2	4.9	104	10.8	<0.1	5	33.5	<0.10	13.9	<10
10/07/2009 10:36	10/07/2009 08:55	281546	<10	<2	1.2	105	10.8	0.9	6	34.1	<0.10	14.3	<10
15/07/2009 15:15	16/07/2009 10:12	283919	11	<2	1.1	108	10.9	0.8	13	34.1	<0.10	14.6	<10
27/08/2009 12:39	28/08/2009 08:40	302510	<10	<2	1.6	98	9.7	0.5	13	32.8	0.11	15.2	20
09/09/2009 11:26	10/09/2009 08:49	307196	<10	<2	1.1	96	9.8	1.5	7	34.9	<0.10	14.5	14
29/09/2009 12:15	30/09/2009 08:54	315528	30	<2	1.1	100	10.2	0.4	26	33.3	<0.10	14.3	11
07/10/2009 11:07	08/10/2009 08:52	320409	50	<2	1.3	113	11.4	0.9	20	33.1	<0.10	13.4	<10
14/10/2009 11:31	14/10/2009 14:24	324015	<10	<2	0.8	102	10.8	1.2	13	33.1	<0.10	13.4	<10
10/11/2009 14:07	11/11/2009 09:10	336482	<10	<2	0.1	95	10.4	0.1	25	32.9	0.26	11.4	120
20/11/2009 10:00	20/11/2009 12:59	341429	11	<2	0.3	100	10.5	0.4	19	33.1	0.19	11.7	81
N.R.= No result													
This site was not sampled on 19/08/09.													

Sampling Point	(130750) Dublin Bay, Drumleck Point, 5km ENE Poolbeg Lighthouse - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 13:49	03/12/2008 17:04	191855	10	<2	0.5	96	11.5	0.8	26	33.6	0.88	7.0	162
10/12/2008 11:21	10/12/2008 15:01	195163	15	<2	0.8	97	11.7	0.1	22	33.4	0.68	7.3	145
22/01/2009 13:14	23/01/2009 08:51	208352	35	<2	0.1	100	11.7	0.8	30	32.5	0.66	6.8	176
28/01/2009 10:02	29/01/2009 08:59	210621	110	<2	1.5	98	11.7	<0.1	24	33.0	0.54	7.4	113
05/02/2009 11:53	05/02/2009 14:43	213865	82	<2	0.4	99	11.9	0.6	34	33.4	0.37	6.2	82
10/02/2009 14:22	11/02/2009 09:36	215416	49	<2	0.5	97	11.9	0.5	25	32.0	0.68	5.8	130
04/03/2009 13:40	05/03/2009 09:35	226262	69	<2	1.1	104	12.2	0.1	51	32.5	0.67	6.7	110
10/03/2009 12:44	11/03/2009 09:11	229144	<10	<2	0.8	101	12.3	0.3	6	33.2	0.13	6.8	21
02/04/2009 13:54	02/04/2009 10:00	239022	<10	<2	0.8	99	11.7	0.4	15	32.9	0.26	8.2	62
21/04/2009 13:05	22/04/2009 08:23	246172	12	<2	2.7	103	11.4	0.5	33	32.8	<0.10	11.1	115
20/05/2009 16:09	21/05/2009 10:31	258838	18	<2	0.8	106	11.6	0.2	24	32.3	0.17	11.0	53
28/05/2009 12:59	29/05/2009 08:31	263510	18	<2	0.3	98	10.5	0.4	13	33.5	<0.10	12.4	<10
10/06/2009 12:56	11/06/2009 08:48	269229	19	<2	2.0	N.R.	N.R.	0.7	18	33.4	<0.10	13.7	16
16/06/2009 11:05	17/06/2009 08:41	271630	<10	<2	3.2	111	11.2	0.7	9	33.0	<0.10	15.3	<10
10/07/2009 11:12	10/07/2009 08:55	281547	<10	<2	2.1	107	11.0	0.1	13	33.4	<0.10	14.5	20
15/07/2009 16:03	16/07/2009 10:12	283920	<10	<2	2.5	110	10.9	<0.1	13	33.6	<0.10	15.7	<10
27/08/2009 13:15	28/08/2009 08:40	302511	<10	<2	1.1	101	10.0	1.7	16	32.5	0.14	15.3	28
09/09/2009 12:06	10/09/2009 08:49	307197	12	<2	2.1	99	10.0	<0.1	10	33.9	<0.10	14.8	23
29/09/2009 12:51	30/09/2009 08:54	315529	46	<2	1.5	102	10.4	1.1	25	33.1	<0.10	14.5	12
07/10/2009 11:35	08/10/2009 08:52	320410	25	<2	1.2	110	11.2	1.5	26	32.4	<0.10	13.3	53
14/10/2009 11:53	14/10/2009 14:24	324016	14	<2	0.8	104	11.0	1.3	23	32.8	<0.10	13.4	48
10/11/2009 14:36	11/11/2009 09:10	336483	<10	<2	0.3	97	10.7	0.1	25	32.4	0.33	11.1	127
20/11/2009 10:00	20/11/2009 12:59	341430	12	<2	0.1	101	10.7	0.5	18	33.1	0.21	11.5	86
N.R.= No result													
This site was not sampled on 19/08/09.													

Sampling Point	(130751) Dublin Bay, Drumleck Point, 5km ENE Poolbeg Lighthouse - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 13:53	03/12/2008 17:04	191856	12	<2	0.4	N.R.	N.R.	0.5	25	34.0	0.83	7.8	138
10/12/2008 11:23	10/12/2008 15:01	195164	10	<2	0.4	N.R.	N.R.	0.7	21	33.3	0.65	7.2	138
22/01/2009 13:17	23/01/2009 08:51	208353	11	<2	0.1	98	11.3	0.5	24	33.3	0.47	7.6	120
28/01/2009 10:04	29/01/2009 08:59	210622	84	<2	<0.1	96	11.4	0.3	20	33.5	0.46	7.6	98
05/02/2009 11:55	05/02/2009 14:43	213866	83	<2	0.4	98	11.8	0.9	38	33.4	0.36	6.4	79
10/02/2009 14:23	11/02/2009 09:36	215417	48	<2	0.8	96	11.9	0.2	25	32.1	0.68	5.8	129
04/03/2009 13:41	05/03/2009 09:35	226261	39	<2	0.5	103	12.1	0.3	32	32.7	0.63	6.7	94
10/03/2009 12:45	11/03/2009 09:11	229145	<10	<2	0.7	100	12.1	0.8	7	33.3	0.15	6.8	23
02/04/2009 13:55	02/04/2009 10:00	239023	<10	<2	0.9	97	11.5	0.9	16	32.9	0.26	8.2	65
21/04/2009 13:06	22/04/2009 08:23	246173	<10	<2	2.7	100	11.4	0.8	15	32.9	<0.10	9.8	43
20/05/2009 16:11	21/05/2009 10:31	258839	<10	<2	1.3	104	11.6	0.5	12	33.1	<0.10	10.7	11
28/05/2009 13:00	29/05/2009 08:31	263511	<10	<2	0.7	97	10.6	0.1	9	33.7	<0.10	11.9	<10
10/06/2009 12:57	11/06/2009 08:48	269230	15	<2	1.3	N.R.	N.R.	0.8	14	33.4	<0.10	13.5	10
16/06/2009 11:08	17/06/2009 08:41	271631	<10	<2	3.1	104	10.8	0.9	6	33.3	<0.10	14.2	10
10/07/2009 11:14	10/07/2009 08:55	281548	<10	<2	1.9	106	10.9	0.7	8	33.6	<0.10	14.4	<10
15/07/2009 16:05	16/07/2009 10:12	283921	<10	<2	0.5	108	10.9	0.1	14	34.0	<0.10	14.6	<10
27/08/2009 13:17	28/08/2009 08:40	302512	<10	<2	1.9	99	9.7	1.3	16	32.5	0.13	15.3	31
09/09/2009 12:09	10/09/2009 08:49	307198	17	<2	0.8	97	9.9	0.8	9	34.3	0.18	14.8	54
29/09/2009 12:53	30/09/2009 08:54	315530	54	<2	0.9	102	10.4	0.9	26	33.2	<0.10	14.4	10
07/10/2009 11:33	08/10/2009 08:52	320411	22	<2	0.9	110	11.1	1.5	16	33.0	<0.10	13.4	14
14/10/2009 11:54	14/10/2009 14:25	324017	<10	<2	1.3	99	10.6	1.2	17	33.0	<0.10	13.4	19
10/11/2009 14:37	11/11/2009 09:10	336484	<10	<2	0.3	95	10.3	<0.1	23	32.9	0.26	11.5	105
20/11/2009 10:00	20/11/2009 12:59	341431	12	<2	0.6	99	10.5	0.7	20	33.1	0.26	11.6	86

N.R.= No result

This site was not sampled on 19/08/09.

Sampling Point	(130760) Dublin Bay, Drumleck Point, 5km ESE Poolbeg Lighthouse - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 14:05	03/12/2008 17:04	191857	<10	<2	0.3	97	11.3	0.8	23	34.0	0.78	8.1	141
10/12/2008 12:19	10/12/2008 15:01	195169	19	<2	0.5	97	11.7	0.2	20	33.5	0.59	7.5	134
22/01/2009 13:32	23/01/2009 08:51	208354	<10	<2	<0.1	100	11.5	<0.1	20	33.6	0.43	7.8	98
28/01/2009 10:59	29/01/2009 08:59	210623	68	<2	<0.1	98	11.6	0.4	16	33.6	0.40	7.6	88
05/02/2009 12:15	05/02/2009 14:43	213867	125	<2	0.3	99	12.0	0.4	35	31.6	0.60	5.8	178
10/02/2009 13:27	11/02/2009 09:36	215418	33	<2	0.5	97	11.9	0.8	22	32.3	0.66	6.0	120
04/03/2009 13:04	05/03/2009 09:35	226272	24	<2	0.8	105	12.3	0.4	27	32.9	0.61	6.7	90
10/03/2009 12:36	11/03/2009 09:14	229146	<10	<2	0.9	101	12.2	<0.1	5	33.3	0.11	6.9	21
02/04/2009 13:20	02/04/2009 10:00	239024	<10	<2	0.5	99	11.7	0.4	11	33.0	0.26	8.1	57
21/04/2009 12:47	22/04/2009 08:28	246174	<10	<2	3.2	102	11.6	0.8	12	32.8	0.13	9.8	30
20/05/2009 15:58	21/05/2009 10:31	258840	<10	<2	2.3	108	12.1	0.9	7	33.3	0.11	10.4	<10
28/05/2009 12:46	29/05/2009 08:32	263512	<10	<2	0.5	98	10.7	<0.1	9	33.6	<0.10	11.9	<10
10/06/2009 12:37	11/06/2009 08:48	269231	<10	<2	1.6	N.R.	N.R.	1.4	13	33.5	<0.10	13.7	<10
16/06/2009 10:55	17/06/2009 08:41	271632	<10	<2	2.4	105	10.8	1.1	5	33.5	N.R.	14.1	10
10/07/2009 11:00	10/07/2009 08:55	281549	<10	<2	1.2	107	11.0	0.8	<5	33.7	<0.10	14.3	<10
15/07/2009 15:47	16/07/2009 10:12	283922	<10	<2	0.4	112	11.2	0.5	13	34.1	<0.10	15.0	<10
27/08/2009 13:02	28/08/2009 08:40	302513	<10	<2	1.5	100	9.9	0.8	10	32.8	<0.10	15.2	10
09/09/2009 11:48	10/09/2009 08:49	307199	10	<2	<0.1	98	9.9	1.1	7	34.9	<0.10	14.6	14
29/09/2009 12:36	30/09/2009 08:54	315531	46	<2	<0.1	102	10.4	2.8	37	33.3	<0.10	14.4	49
07/10/2009 11:26	08/10/2009 08:52	320412	<10	<2	1.2	111	11.2	2.3	12	33.0	<0.10	13.6	<10
14/10/2009 11:45	14/10/2009 14:25	324018	<10	<2	0.8	103	10.9	1.3	14	33.0	<0.10	13.4	10
10/11/2009 14:26	11/11/2009 09:10	336485	<10	<2	0.3	97	10.6	0.6	22	32.8	0.26	11.4	110
20/11/2009 10:00	20/11/2009 12:59	341432	<10	<2	0.3	101	10.6	0.4	16	33.3	0.17	11.8	75

N.R.= No result

This site was not sampled on 19/08/09.

Sampling Point	(130761) Dublin Bay, Drumleck Point, 5km ESE Poolbeg Lighthouse - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 14:08	03/12/2008 17:04	191858	15	<2	0.4	N.R.	N.R.	0.4	22	33.9	0.82	7.8	141
10/12/2008 12:23	10/12/2008 15:01	195170	12	<2	0.3	N.R.	N.R.	0.7	20	33.7	0.61	7.1	168
22/01/2009 13:34	23/01/2009 08:51	208355	<10	<2	0.1	98	11.2	0.5	20	33.5	0.39	7.9	97
28/01/2009 11:02	29/01/2009 08:59	210624	71	<2	0.3	96	11.4	0.3	16	33.6	0.41	7.7	84
05/02/2009 12:16	05/02/2009 14:43	213868	77	<2	0.4	98	11.8	0.7	30	33.4	0.37	6.5	80
10/02/2009 13:28	11/02/2009 09:36	215419	34	<2	0.5	95	11.7	1.0	22	32.3	0.66	5.8	124
04/03/2009 13:06	05/03/2009 09:35	226271	20	<2	0.8	103	12.1	0.7	28	32.9	0.60	6.8	89
10/03/2009 12:37	11/03/2009 09:14	229147	<10	<2	0.7	99	12.0	0.7	6	33.3	0.11	6.9	17
02/04/2009 13:22	02/04/2009 10:00	239025	<10	<2	0.9	97	11.5	0.3	12	33.0	0.25	8.0	53
21/04/2009 12:49	22/04/2009 08:28	246175	<10	<2	1.9	100	11.4	0.8	14	33.0	0.15	9.6	39
20/05/2009 15:59	21/05/2009 10:31	258841	<10	<2	2.8	107	11.9	0.4	8	33.4	<0.10	10.4	<10
28/05/2009 12:48	29/05/2009 08:32	263513	<10	<2	1.1	96	10.6	0.5	9	33.7	<0.10	11.5	<10
10/06/2009 12:39	11/06/2009 08:48	269232	13	<2	1.1	N.R.	N.R.	1.2	14	33.5	<0.10	13.4	<10
16/06/2009 10:56	17/06/2009 08:41	271633	<10	<2	2.3	103	10.7	1.1	5	33.5	<0.10	13.8	10
10/07/2009 11:02	10/07/2009 08:55	281550	<10	<2	1.6	104	10.7	0.5	<5	33.7	<0.10	14.3	<10
15/07/2009 15:50	16/07/2009 10:12	283923	<10	<2	1.1	107	10.9	1.3	39	34.1	<0.10	14.3	810
27/08/2009 13:04	28/08/2009 08:40	302514	<10	<2	0.8	99	9.7	0.8	10	32.8	<0.10	15.2	11
09/09/2009 11:49	10/09/2009 08:49	307200	<10	<2	0.3	95	9.6	2.0	7	34.8	<0.10	14.6	16
29/09/2009 12:37	30/09/2009 08:54	315532	35	<2	0.5	100	10.3	1.6	26	33.2	<0.10	14.3	22
07/10/2009 11:24	08/10/2009 08:52	320413	12	<2	1.5	110	11.1	1.7	12	33.1	<0.10	13.5	<10
14/10/2009 11:46	14/10/2009 14:25	324019	<10	<2	1.7	102	10.8	1.2	14	33.0	<0.10	13.4	10
10/11/2009 14:27	11/11/2009 09:10	336486	<10	<2	0.5	95	10.3	0.4	21	33.0	0.24	11.6	98
20/11/2009 10:00	20/11/2009 12:59	341433	<10	<2	0.3	99	10.4	0.5	16	33.3	0.16	12.0	74

N.R.= No result

This site was not sampled on 19/08/09.

Sampling Point	(130770) Dublin Bay, Dún Laoghaire, 5km E of S Poolbeg Lighthouse - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 14:17	03/12/2008 17:04	191859	<10	<2	0.3	97	11.3	0.3	22	34.0	0.80	8.0	139
10/12/2008 11:39	10/12/2008 15:01	195165	10	<2	0.5	97	11.7	0.3	22	33.4	0.67	7.3	144
22/01/2009 13:48	23/01/2009 08:51	208356	<10	<2	0.1	100	11.4	0.3	20	33.6	0.42	7.8	98
28/01/2009 10:16	29/01/2009 08:59	210625	71	<2	0.3	98	11.6	0.1	16	33.6	0.41	7.5	87
05/02/2009 12:27	05/02/2009 14:43	213869	223	<2	0.3	98	12.2	0.7	65	28.1	0.99	5.2	399
10/02/2009 13:38	11/02/2009 09:36	215420	28	<2	0.5	97	12.0	0.6	21	32.5	0.61	5.8	108
04/03/2009 13:13	05/03/2009 09:35	226270	36	<2	0.7	105	12.4	0.5	48	33.0	0.60	6.6	91
10/03/2009 12:20	11/03/2009 09:14	229148	<10	<2	0.8	101	12.2	0.1	5	33.4	0.14	7.0	21
02/04/2009 13:08	02/04/2009 10:00	239026	<10	<2	0.8	99	11.7	0.3	11	33.0	0.25	8.1	54
21/04/2009 12:34	22/04/2009 08:28	246176	<10	<2	1.5	101	11.4	0.3	19	32.7	<0.10	10.1	65
20/05/2009 15:46	21/05/2009 10:31	258842	<10	<2	1.3	107	11.9	<0.1	7	33.4	<0.10	10.3	<10
28/05/2009 12:34	29/05/2009 08:32	263514	<10	<2	0.8	97	10.6	0.2	9	33.6	<0.10	11.8	<10
10/06/2009 12:20	11/06/2009 08:48	269233	11	<2	1.3	N.R.	N.R.	0.5	14	33.5	<0.10	13.8	<10
16/06/2009 10:44	17/06/2009 08:41	271634	<10	<2	2.3	108	11.1	0.8	8	33.3	<0.10	14.3	14
10/07/2009 10:44	10/07/2009 08:55	281551	<10	<2	1.2	107	11.0	0.9	<5	34.1	<0.10	14.3	<10
15/07/2009 15:27	16/07/2009 10:12	283924	37	<2	1.7	110	11.1	<0.1	65	34.1	<0.10	14.8	855
27/08/2009 12:48	28/08/2009 08:40	302515	<10	<2	1.3	99	9.8	1.0	9	32.8	0.12	15.1	10
09/09/2009 11:34	10/09/2009 08:49	307201	<10	<2	<0.1	98	9.9	2.6	6	34.8	<0.10	14.7	10
29/09/2009 12:23	30/09/2009 08:54	315533	49	<2	0.1	102	10.4	1.4	32	33.3	<0.10	14.4	27
07/10/2009 11:17	08/10/2009 08:52	320414	13	<2	1.1	112	11.2	1.6	13	33.1	<0.10	13.6	<10
14/10/2009 11:36	14/10/2009 14:25	324020	<10	<2	0.9	104	11.0	1.3	12	33.1	<0.10	13.4	<10
10/11/2009 14:15	11/11/2009 09:10	336487	<10	<2	0.4	97	10.6	0.1	27	32.5	0.30	11.4	127
20/11/2009 10:00	20/11/2009 12:59	341434	<10	<2	0.3	101	10.6	0.4	16	33.3	0.17	11.6	76

N.R.= No result

This site was not sampled on 19/08/09.

Sampling Point	(130771) Dublin Bay, Dún Laoghaire, 5km E of S Poolbeg Lighthouse - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 14:21	03/12/2008 17:04	191860	<10	<2	0.5	N.R.	N.R.	0.1	22	34.0	0.67	7.7	141
10/12/2008 11:43	10/12/2008 15:01	195166	11	<2	0.5	N.R.	N.R.	0.5	22	33.4	0.63	7.2	148
22/01/2009 13:49	23/01/2009 08:51	208357	<10	<2	<0.1	98	11.3	0.7	21	33.5	0.45	7.8	103
28/01/2009 10:19	29/01/2009 08:59	210626	63	<2	0.1	96	11.4	0.3	16	33.6	0.41	7.5	89
05/02/2009 12:29	05/02/2009 14:43	213870	95	<2	0.7	98	11.8	0.1	38	33.3	0.39	6.4	89
10/02/2009 13:40	11/02/2009 09:36	215421	28	<2	0.5	95	11.7	0.9	20	32.5	0.61	5.8	109
04/03/2009 13:15	05/03/2009 09:35	226269	35	<2	0.7	103	12.1	0.4	90	32.9	0.60	6.7	91
10/03/2009 12:21	11/03/2009 09:14	229149	<10	<2	0.5	100	12.0	0.6	6	33.5	0.17	7.0	22
02/04/2009 13:10	02/04/2009 10:00	239027	<10	<2	1.1	97	11.6	0.7	12	33.0	0.25	8.0	53
21/04/2009 12:36	22/04/2009 08:28	246177	<10	<2	1.3	98	11.2	0.3	17	33.0	0.16	9.6	63
20/05/2009 15:47	21/05/2009 10:31	258843	<10	<2	0.2	106	11.8	0.6	7	33.4	<0.10	10.4	<10
28/05/2009 12:35	29/05/2009 08:32	263515	<10	<2	1.6	97	10.6	0.2	9	33.7	<0.10	11.5	<10
10/06/2009 12:22	11/06/2009 08:48	269234	15	<2	0.5	N.R.	N.R.	0.1	15	33.5	<0.10	13.3	<10
16/06/2009 10:45	17/06/2009 08:41	271635	<10	<2	1.7	103	10.7	0.8	5	33.5	<0.10	13.9	10
10/07/2009 10:47	10/07/2009 08:55	281552	<10	<2	1.1	104	10.7	0.8	5	33.7	<0.10	14.3	<10
15/07/2009 15:30	16/07/2009 10:12	283925	84	<2	4.7	107	10.8	<0.1	45	34.1	<0.10	14.5	47
27/08/2009 12:50	28/08/2009 08:40	302516	<10	<2	1.1	97	9.6	0.8	11	32.8	0.14	15.2	16
09/09/2009 11:36	10/09/2009 08:49	307202	15	<2	<0.1	95	9.7	1.8	7	34.8	0.13	14.6	34
29/09/2009 12:25	30/09/2009 08:54	315534	51	<2	1.5	101	10.4	0.9	38	33.3	<0.10	14.3	27
07/10/2009 11:15	08/10/2009 08:52	320415	11	<2	1.3	110	11.1	0.6	12	33.1	<0.10	13.4	<10
14/10/2009 11:37	14/10/2009 14:25	324021	<10	<2	0.8	102	10.8	0.9	12	33.1	<0.10	13.4	<10
10/11/2009 14:16	11/11/2009 09:11	336488	<10	<2	0.5	95	10.3	<0.1	22	32.8	0.26	11.5	103
20/11/2009 10:00	20/11/2009 12:59	341435	12	<2	1.2	99	10.4	<0.1	18	33.3	0.18	11.9	76

N.R.= No result

This site was not sampled on 19/08/09.

Sampling Point	(130860) Liffey Estuary Upper, Liffey at Heuston Bridge - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia µg/l as N	B.O.D. Saline mg/l	Chlorophyll a mg/m3	D.O. % Sat.	D.O. mg/l	Pheophytin a mg/m3	P (React) µg/l SRP as P	Salinity PSU	Silica mg/l	Temp. °C	TON µg/l as N
03/12/2008 08:43	03/12/2008 16:41	191832	60	<2	0.4	99	12.8	0.4	30	0.2	3.65	3.9	2020
04/12/2008 12:42	05/12/2008 10:00	192984	70	<2	1.3	100	11.8	4.7	40	0.2	3.67	6.4	2080
10/12/2008 15:50	10/12/2008 16:52	195253	60	<2	0.4	100	12.8	0.5	30	0.3	4.50	5.0	2090
11/12/2008 09:57	11/12/2008 14:44	195913	90	<2	0.4	101	12.9	0.3	30	0.2	4.63	4.5	2200
20/01/2009 14:34	21/01/2009 08:18	206638	82	<2	<0.1	97	11.9	2.0	59	0.3	6.65	5.2	2280
22/01/2009 08:21	23/01/2009 08:24	208329	61	<2	0.3	98	11.6	0.8	58	0.3	5.99	6.1	1590
28/01/2009 14:52	29/01/2009 08:22	210598	100	<2	0.5	99	11.6	0.2	40	0.3	5.59	8.1	1970
29/01/2009 07:17	29/01/2009 11:46	210901	143	<2	0.3	100	12.2	0.6	50	0.3	9.14	6.2	1970
04/02/2009 09:09	04/02/2009 12:23	213224	214	3	0.1	100	13.0	0.2	75	0.3	5.85	3.4	1950
05/02/2009 07:38	05/02/2009 14:33	213810	146	2	1.1	101	13.1	1.8	92	0.2	5.94	3.4	1980
11/02/2009 10:47	12/02/2009 09:09	216063	129	<2	<0.1	99	12.4	2.2	33	0.2	7.11	5.7	2020
11/02/2009 18:43	11/02/2009 09:41	215423	130	<2	0.4	100	12.9	0.7	31	0.2	7.15	4.1	1980
03/03/2009 13:41	04/03/2009 09:03	225387	45	<2	0.7	104	11.8	0.5	44	0.3	5.36	8.3	2040
04/03/2009 09:57	05/03/2009 09:36	226289	285	<2	0.7	100	11.5	0.5	75	0.3	5.98	7.2	2080
10/03/2009 17:49	11/03/2009 09:15	229158	80	<2	0.9	101	11.7	0.7	27	0.3	4.60	8.8	1870
12/03/2009 15:31	13/03/2009 08:01	230281	152	<2	0.8	102	11.2	0.5	31	1.5	3.89	10.1	1580
02/04/2009 11:08	03/04/2009 08:45	239859	168	<2	2.4	N.R.	N.R.	1.4	23	1.5	1.90	13.8	2020
02/04/2009 15:55	03/04/2009 08:45	239861	143	<2	1.9	114	12.0	0.7	22	0.5	1.84	12.9	2020
21/04/2009 16:09	22/04/2009 08:28	246179	12	<2	1.9	115	11.7	1.7	27	0.4	4.83	14.8	2130
22/04/2009 09:16	23/04/2009 08:22	247067	15	<2	1.7	96	10.3	4.9	20	0.3	6.70	12.2	1930
14/05/2009 08:25	14/05/2009 14:27	255564	109	<2	2.0	89	9.4	1.3	13	0.3	1.43	12.3	2110
14/05/2009 14:01	14/05/2009 09:32	255287	<10	<2	2.1	99	10.5	0.9	16	0.6	1.43	12.4	1900
27/05/2009 12:50	28/05/2009 08:33	262672	62	<2	1.1	95	9.5	1.2	76	0.3	4.60	15.1	2080
28/05/2009 07:41	29/05/2009 08:32	263526	24	<2	2.0	92	9.6	2.0	75	0.2	4.91	13.6	1790
09/06/2009 16:13	10/06/2009 08:31	268390	52	<2	1.3	97	9.8	1.4	53	0.2	7.01	14.6	1800
10/06/2009 08:07	11/06/2009 08:48	269245	55	<2	1.2	N.R.	N.R.	1.3	55	0.2	6.61	15.1	1580
16/06/2009 13:45	17/06/2009 08:41	271617	113	<2	0.8	100	9.3	1.1	57	0.2	7.12	18.8	1660
18/06/2009 06:55	19/06/2009 08:27	272980	63	<2	1.1	98	10.0	1.3	56	0.2	0.65	14.5	1630
08/07/2009 06:17	08/07/2009 09:11	280448	48	<2	2.3	93	9.1	1.4	68	0.8	5.87	16.2	1690
10/07/2009 15:39	10/07/2009 08:55	281613	20	<2	3.2	103	10.2	1.6	57	0.9	6.08	16.3	1850
14/07/2009 14:57	15/07/2009 09:41	283480	55	<2	1.9	102	9.8	1.2	73	0.3	4.22	16.5	1410
15/07/2009 10:04	16/07/2009 10:12	283936	<10	<2	1.9	102	10.1	1.3	81	0.3	5.20	15.3	1450
19/08/2009 09:03	19/08/2009 14:59	297988	<10	<2	0.9	89	8.4	1.0	46	1.3	9.11	17.1	2090
20/08/2009 15:44	21/08/2009 08:53	299078	77	3	2.9	98	9.2	3.8	63	0.2	7.89	17.7	508
26/08/2009 14:47	27/08/2009 08:51	301834	27	<2	1.3	101	9.6	1.0	31	0.3	8.15	17.3	1150
27/08/2009 09:09	28/08/2009 08:40	302527	37	<2	0.9	97	9.5	1.0	35	0.3	7.75	15.8	592
01/09/2009 15:32	02/09/2009 08:44	304109	31	<2	0.8	102	9.8	1.1	38	0.3	9.63	17.1	919
02/09/2009 09:30	02/09/2009 14:26	304548	20	<2	0.7	99	9.9	1.3	25	0.3	8.07	14.2	629
08/09/2009 12:20	09/09/2009 08:47	306741	59	<2	0.8	95	9.4	0.6	45	0.3	8.15	16.2	1090
09/09/2009 07:21	10/09/2009 08:49	307213	<10	<2	0.4	96	10.0	0.8	<5	0.7	6.56	13.3	1050
08/10/2009 06:49	09/10/2009 08:58	321341	97	<2	0.4	97	10.4	0.9	49	4.7	6.78	12.4	2110
08/10/2009 13:51	09/10/2009 09:24	321358	53	<2	0.3	104	11.2	0.8	46	0.6	7.91	11.6	1930
27/10/2009 13:40	28/10/2009 08:44	328590	<10	<2	0.3	103	10.9	0.5	38	0.2	6.18	13.6	1350
29/10/2009 08:10	29/10/2009 11:36	329772	107	<2	0.8	97	10.0	1.0	80	0.2	6.00	13.6	1120
11/11/2009 11:52	11/11/2009 14:47	337098	<10	<2	0.5	98	11.1	1.0	38	0.3	5.09	10.0	1140
12/11/2009 07:16	12/11/2009 11:11	337413	77	<2	0.7	100	11.6	1.5	57	0.3	4.95	8.3	1160
17/11/2009 18:10	18/11/2009 10:44	340174	51	<2	1.3	96	10.6	4.7	41	0.2	5.77	10.7	1210
19/11/2009 11:06	20/11/2009 09:12	341226	62	<2	0.5	99	10.7	1.6	66	0.2	5.37	11.8	1100

N.R.= No result

(130870) Liffey Estuary Upper, Liffey at Matt Talbot Bridge - Surface Sample													
Sampling Point	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
Sampled Date			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 11:12	03/12/2008 16:41	191833	50	<2	0.3	98	12.5	0.6	40	0.4	3.32	4.7	1980
04/12/2008 14:28	05/12/2008 10:00	192985	70	<2	1.0	98	11.8	2.9	30	0.9	2.65	5.5	2130
10/12/2008 13:47	10/12/2008 16:52	195254	50	<2	0.7	100	13.0	0.5	30	0.4	5.17	4.6	2060
11/12/2008 10:32	11/12/2008 14:44	195914	100	<2	0.1	100	12.9	0.3	40	1.5	4.13	4.5	3260
20/01/2009 11:17	21/01/2009 08:18	206639	100	<2	0.1	98	12.2	2.3	99	0.6	7.69	4.5	2660
22/01/2009 09:38	23/01/2009 08:24	208330	57	<2	0.3	98	12.0	0.4	57	3.3	5.78	5.3	1580
28/01/2009 12:55	29/01/2009 08:22	210599	115	<2	0.1	99	12.1	0.4	41	6.1	5.69	6.4	1980
29/01/2009 08:56	29/01/2009 11:46	210902	137	<2	0.3	100	12.2	0.5	50	0.6	8.44	6.0	1960
04/02/2009 10:25	04/02/2009 12:23	213225	227	5	3.7	99	12.8	4.7	90	0.3	5.84	3.5	1950
05/02/2009 10:09	05/02/2009 14:33	213811	154	<2	1.2	94	11.5	1.9	93	7.2	6.05	5.6	1960
11/02/2009 15:48	11/02/2009 09:41	215424	138	<2	0.7	99	12.8	0.4	34	0.4	7.00	4.3	1990
12/02/2009 14:05	12/02/2009 09:24	216092	123	<2	0.5	99	12.8	0.2	34	2.4	6.70	4.4	1910
03/03/2009 15:31	04/03/2009 09:03	225388	56	<2	0.4	102	11.9	0.3	50	7.1	5.23	7.0	1920
04/03/2009 10:40	05/03/2009 09:36	226288	267	<2	0.9	99	11.9	0.3	56	1.5	5.84	5.9	2050
10/03/2009 15:18	11/03/2009 09:14	229150	114	<2	0.8	101	12.2	0.7	34	2.4	2.23	7.0	1590
12/03/2009 12:04	13/03/2009 08:01	230282	53	<2	0.7	99	11.5	0.5	32	6.4	4.56	8.7	1000
01/04/2009 15:32	02/04/2009 09:55	238996	78	<2	0.3	100	11.4	<0.1	33	9.1	2.25	9.8	1530
02/04/2009 11:36	03/04/2009 08:45	239862	163	<2	0.7	99	11.2	0.7	28	10.6	1.25	10.2	1840
21/04/2009 14:55	22/04/2009 08:28	246180	65	<2	0.8	95	10.3	0.2	48	11.4	3.71	12.3	1610
23/04/2009 12:10	23/04/2009 08:27	247068	34	<2	1.2	94	10.1	2.1	28	3.4	1.63	12.4	1800
14/05/2009 10:57	14/05/2009 14:27	255565	117	<2	0.5	90	9.6	2.4	27	7.0	1.32	12.2	1690
14/05/2009 15:07	15/05/2009 10:53	255795	104	<2	0.8	90	9.5	1.4	34	8.1	2.28	12.4	2130
27/05/2009 15:38	28/05/2009 08:39	262673	76	<2	0.7	93	9.6	1.1	75	4.6	4.61	13.7	1890
28/05/2009 09:18	29/05/2009 08:32	263527	33	<2	1.6	93	9.5	3.2	77	1.2	5.19	14.6	1730
09/06/2009 14:43	10/06/2009 08:31	268391	92	<2	0.9	94	9.8	1.1	58	1.5	6.47	13.3	1740
10/06/2009 09:42	11/06/2009 08:48	269246	49	<2	1.1	94	9.6	1.5	57	0.6	6.46	13.8	1490
16/06/2009 12:38	17/06/2009 08:41	271618	82	<2	0.8	103	10.1	0.9	65	2.9	7.15	16.6	1440
18/06/2009 12:11	19/06/2009 08:27	272981	98	<2	1.2	95	9.7	1.8	69	2.2	7.05	14.8	1590
08/07/2009 08:09	08/07/2009 09:11	280449	72	<2	2.1	84	8.2	1.7	77	5.0	5.21	16.2	1470
10/07/2009 12:55	10/07/2009 08:55	281614	54	<2	1.3	97	9.6	0.2	58	31.3	3.91	15.9	1010
14/07/2009 18:24	15/07/2009 09:41	283481	58	<2	2.9	100	9.7	1.0	75	1.6	4.31	16.1	1280
15/07/2009 12:24	16/07/2009 10:12	283937	20	<2	2.0	100	9.7	1.4	85	2.0	5.25	16.1	1330
19/08/2009 11:10	19/08/2009 14:59	297989	29	<2	1.1	89	8.5	1.0	38	12.7	6.49	17.6	1040
20/08/2009 17:04	21/08/2009 08:53	299079	71	4	4.0	94	8.9	6.1	67	0.4	7.40	17.6	472
26/08/2009 18:50	27/08/2009 08:51	301835	59	<2	1.3	98	9.4	0.5	30	5.8	8.03	16.0	682
27/08/2009 10:29	28/08/2009 08:40	302528	30	<2	0.8	94	9.2	0.9	32	6.5	9.73	15.4	486
01/09/2009 16:52	02/09/2009 08:44	304110	46	<2	0.5	100	9.8	1.1	62	1.7	10.70	15.6	882
02/09/2009 13:05	02/09/2009 14:26	304549	43	<2	0.4	98	9.8	0.8	50	2.6	10.50	14.4	988
08/09/2009 16:05	09/09/2009 08:48	306742	77	<2	0.4	98	9.8	1.2	55	4.7	5.79	14.9	850
09/09/2009 09:04	10/09/2009 08:49	307214	15	<2	0.4	91	9.3	1.1	12	5.1	6.49	14.1	533
07/10/2009 15:34	08/10/2009 08:52	320416	112	<2	1.2	105	10.9	<0.1	49	7.7	5.33	12.7	1640
08/10/2009 10:11	09/10/2009 08:58	321342	102	<2	0.3	94	9.8	0.5	52	9.5	5.55	12.3	1470
27/10/2009 12:45	28/10/2009 08:44	328592	11	<2	<0.1	102	11.0	1.0	36	1.5	5.90	12.1	1270
29/10/2009 10:13	29/10/2009 11:36	329773	58	<2	0.5	100	10.6	0.8	85	1.7	6.69	12.8	1060
11/11/2009 12:31	11/11/2009 14:47	337099	12	<2	0.7	98	11.3	1.2	41	0.5	4.93	9.0	1060
12/11/2009 09:57	12/11/2009 11:11	337414	84	<2	0.5	99	11.3	1.1	82	0.4	6.08	8.8	1050
17/11/2009 16:38	18/11/2009 10:44	340175	39	<2	0.7	101	11.5	1.2	45	0.4	5.72	8.5	1390
19/11/2009 12:47	20/11/2009 09:12	341227	71	<2	0.6	99	10.8	1.6	68	0.7	5.26	11.0	1260

(130871) Liffey Estuary Upper, Liffey at Matt Talbot Bridge - Depth Sample													
Sampling Point	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
Sampled Date			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 11:14	03/12/2008 16:41	191834	29	6	0.4	100	12.1	0.2	29	27.4	1.39	6.9	1640
04/12/2008 14:32	05/12/2008 10:00	192986	156	<2	0.4	89	10.4	1.7	53	30.8	0.72	6.9	393
10/12/2008 13:49	10/12/2008 16:52	195255	76	<2	0.8	96	12.0	1.2	34	25.5	1.84	6.1	550
11/12/2008 10:34	11/12/2008 14:44	195915	130	<2	0.4	98	12.0	0.3	50	32.1	4.17	6.2	261
20/01/2009 11:21	21/01/2009 08:18	206640	70	<2	<0.1	92	10.8	1.7	38	31.6	1.92	6.9	368
22/01/2009 09:48	23/01/2009 08:24	208331	77	<2	<0.1	90	10.6	0.8	40	32.4	0.90	7.0	205
28/01/2009 12:57	29/01/2009 08:22	210600	162	<2	0.5	84	10.0	<0.1	<5	32.2	0.85	7.2	236
29/01/2009 09:00	29/01/2009 11:46	210903	164	<2	<0.1	84	10.0	0.9	39	31.6	0.93	7.1	294
04/02/2009 10:32	04/02/2009 12:23	213226	230	6	6.1	99	12.8	6.0	89	0.3	6.52	3.3	1950
05/02/2009 10:09	05/02/2009 14:33	213812	251	<2	0.7	94	11.5	1.0	75	7.2	2.91	5.6	772
11/02/2009 15:51	11/02/2009 09:41	215425	157	<2	0.4	85	10.6	0.5	24	30.3	2.15	5.8	373
12/02/2009 14:07	12/02/2009 09:24	216093	165	<2	0.3	79	9.9	0.3	44	31.1	1.93	5.9	226
03/03/2009 15:34	04/03/2009 09:03	225389	74	<2	0.5	99	11.6	0.2	30	31.8	1.02	7.1	233
04/03/2009 10:42	05/03/2009 09:35	226287	115	<2	1.6	96	11.2	<0.1	46	31.6	0.89	6.9	125
10/03/2009 15:21	11/03/2009 09:14	229151	47	<2	0.7	94	11.4	0.8	18	27.2	0.54	6.9	102
12/03/2009 12:07	13/03/2009 08:01	230283	72	<2	0.3	89	10.8	0.5	51	32.4	0.22	7.2	33
01/04/2009 15:34	02/04/2009 09:56	238997	73	<2	0.8	92	10.8	<0.1	36	31.6	0.46	8.4	130
02/04/2009 11:38	03/04/2009 08:45	239863	87	<2	1.6	93	10.8	0.3	32	31.0	0.49	8.9	173
21/04/2009 14:57	22/04/2009 08:28	246181	191	<2	0.7	81	9.1	0.5	79	30.3	0.11	10.5	203
23/04/2009 12:12	23/04/2009 08:27	247069	266	<2	0.7	66	7.5	0.8	86	31.2	0.14	10.0	126
14/05/2009 10:59	14/05/2009 14:27	255566	233	<2	0.2	76	8.1	1.4	94	30.2	0.52	11.7	177
14/05/2009 15:09	15/05/2009 10:53	255796	195	<2	1.1	81	8.7	0.2	86	30.6	0.46	11.7	140
27/05/2009 15:39	28/05/2009 08:39	262674	162	<2	1.3	83	8.9	2.6	72	32.4	0.41	12.2	51
28/05/2009 09:21	29/05/2009 08:32	263528	128	<2	5.7	82	8.8	3.9	64	27.2	1.04	12.6	211
09/06/2009 14:46	10/06/2009 08:31	268392	171	<2	0.9	82	7.9	1.3	70	29.8	0.80	12.9	156
10/06/2009 09:44	11/06/2009 08:48	269247	299	<2	0.8	61	6.3	0.6	299	30.2	0.79	13.5	116
16/06/2009 12:40	17/06/2009 08:41	271619	300	<2	<0.1	60	6.1	2.7	136	31.0	0.68	14.7	68
18/06/2009 12:16	19/06/2009 08:27	272982	279	<2	1.7	88	8.9	1.0	102	31.5	0.59	14.7	98
08/07/2009 08:11	08/07/2009 09:11	280450	140	<2	2.1	72	7.1	0.8	63	32.4	0.33	15.6	60
10/07/2009 12:57	10/07/2009 08:55	281615	160	<2	2.0	68	6.8	0.6	69	32.7	0.32	15.5	37
14/07/2009 18:26	15/07/2009 09:41	283482	137	<2	6.8	82	8.0	2.9	63	32.0	0.26	15.5	84
15/07/2009 12:26	16/07/2009 10:12	283938	88	<2	1.6	90	8.9	0.5	50	31.4	0.19	15.7	93
19/08/2009 11:13	19/08/2009 14:59	297990	26	<2	0.8	93	9.1	0.7	15	30.5	0.42	16.4	39
20/08/2009 17:10	21/08/2009 08:54	299080	73	6	35.2	92	8.7	56.0	67	3.5	<0.10	17.4	379
26/08/2009 18:52	27/08/2009 08:51	301836	106	<2	2.0	81	7.9	1.2	54	31.1	0.28	15.9	77
27/08/2009 10:31	28/08/2009 08:40	302529	32	<2	2.3	87	8.5	1.0	22	27.3	0.29	15.6	51
01/09/2009 16:58	02/09/2009 08:44	304111	25	<2	0.8	96	9.6	1.2	13	31.2	0.46	15.1	78
02/09/2009 13:07	02/09/2009 14:26	304550	55	<2	<0.1	84	8.3	2.1	20	32.5	0.28	15.0	28
08/09/2009 16:06	09/09/2009 08:48	306743	60	<2	1.5	86	8.7	1.2	22	32.3	0.30	14.5	57
09/09/2009 09:07	10/09/2009 08:49	307215	42	<2	1.5	82	8.4	2.0	10	32.2	0.36	14.5	67
07/10/2009 15:37	08/10/2009 08:52	320417	49	<2	2.1	97	9.7	0.4	31	31.9	0.27	14.0	151
08/10/2009 10:13	09/10/2009 08:58	321343	190	<2	2.1	90	9.0	2.8	54	31.9	0.33	13.8	103
27/10/2009 12:47	28/10/2009 08:44	328591	56	<2	0.3	98	10.3	0.4	35	30.5	0.72	12.9	192
29/10/2009 10:14	29/10/2009 11:36	329774	124	<2	0.4	82	8.6	0.8	54	30.9	7.69	13.1	129
11/11/2009 12:33	11/11/2009 14:47	337100	40	<2	<0.1	90	9.9	1.6	36	30.6	0.78	10.9	227
12/11/2009 09:59	12/11/2009 11:11	337415	84	<2	1.3	82	8.9	1.7	48	30.5	0.96	11.0	227
17/11/2009 16:41	18/11/2009 10:44	340176	64	<2	0.6	98	11.0	0.9	44	14.4	2.95	9.2	738
19/11/2009 12:51	20/11/2009 09:12	341228	126	<2	0.4	72	7.8	0.8	44	30.2	0.74	11.1	156

(130800) Liffey Estuary Lower, Dodder Grand Canal Basin- Surface Sample													
Sampling Point	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
Sampled Date			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 11:24	03/12/2008 16:41	191835	120	<2	<0.1	95	12.1	0.5	30	4.2	2.98	4.7	2360
04/12/2008 14:43	05/12/2008 10:00	192987	90	2	1.1	98	11.7	6.9	50	0.7	4.06	5.7	1460
10/12/2008 14:02	10/12/2008 16:52	195243	60	<2	0.3	98	12.6	0.1	30	3.1	1.86	4.8	2420
11/12/2008 10:44	11/12/2008 14:44	195916	60	<2	0.1	96	12.6	0.3	30	1.5	5.46	3.8	1750
20/01/2009 11:34	21/01/2009 08:18	206641	62	<2	<0.1	98	12.2	1.5	33	4.0	7.48	4.4	2220
22/01/2009 09:58	23/01/2009 08:24	208332	24	<2	0.1	98	11.8	1.0	33	4.6	6.96	5.7	1390
28/01/2009 13:08	29/01/2009 08:22	210601	45	<2	<0.1	100	12.4	0.7	35	0.8	7.26	5.9	1560
29/01/2009 09:14	29/01/2009 11:46	210904	83	<2	0.4	99	12.1	0.7	30	7.6	7.53	6.1	1830
04/02/2009 10:42	04/02/2009 12:23	213227	299	5	1.6	100	12.8	2.1	146	0.8	6.19	3.9	1990
05/02/2009 09:55	05/02/2009 14:33	213813	95	<2	0.4	98	12.5	1.8	58	0.6	7.12	4.2	2110
11/02/2009 13:49	12/02/2009 09:08	216052	85	<2	0.3	98	12.6	0.4	28	1.5	8.47	4.8	2040
11/02/2009 16:08	11/02/2009 09:41	215426	78	<2	0.5	97	12.5	0.5	11	4.8	7.73	4.4	2030
03/03/2009 15:42	04/03/2009 09:03	225390	51	<2	1.1	104	12.2	0.7	23	9.9	4.11	7.0	1670
04/03/2009 10:49	05/03/2009 09:35	226286	50	<2	1.1	102	12.3	0.9	32	3.2	4.99	5.8	1640
10/03/2009 15:31	11/03/2009 09:14	229152	51	<2	2.4	104	12.7	2.5	19	1.7	2.69	6.6	541
12/03/2009 12:17	13/03/2009 08:01	230284	22	<2	0.7	103	11.9	0.6	21	10.6	3.20	8.7	698
01/04/2009 15:47	02/04/2009 09:56	238998	29	<2	0.3	107	12.1	0.2	17	11.7	3.98	9.9	1280
02/04/2009 11:46	03/04/2009 08:45	239864	<10	<2	0.5	109	12.4	0.8	14	6.7	3.77	9.8	1470
21/04/2009 15:08	22/04/2009 08:28	246182	59	<2	0.9	115	12.0	0.7	30	5.9	7.29	13.4	1360
22/04/2009 12:01	23/04/2009 08:22	247056	47	<2	0.9	94	10.2	0.6	31	7.2	1.06	11.8	1320
14/05/2009 11:09	14/05/2009 14:26	255554	34	<2	0.3	88	9.5	2.0	56	2.0	6.10	11.1	1580
14/05/2009 15:23	15/05/2009 10:53	255789	29	<2	0.5	90	9.5	<0.1	37	1.5	5.29	12.2	1640
27/05/2009 15:27	28/05/2009 08:33	262661	38	<2	0.4	95	10.0	1.0	36	15.2	6.14	13.0	1210
28/05/2009 09:30	29/05/2009 08:32	263516	62	<2	3.7	88	9.1	4.0	51	0.7	6.10	14.1	1050
09/06/2009 14:33	10/06/2009 08:31	268379	31	<2	0.1	100	10.3	0.2	35	1.0	7.48	13.6	1560
10/06/2009 09:56	11/06/2009 08:48	269235	39	<2	0.1	92	9.7	0.1	35	1.2	7.51	13.2	1040
16/06/2009 12:30	17/06/2009 08:40	271607	54	<2	1.5	109	10.6	1.0	37	6.9	5.78	17.0	839
18/06/2009 11:56	19/06/2009 08:27	272969	66	<2	1.1	94	9.6	1.3	36	5.6	6.57	14.6	846
08/07/2009 07:59	08/07/2009 09:11	280438	20	<2	2.0	86	8.5	2.9	34	1.7	6.85	15.6	945
10/07/2009 13:06	10/07/2009 08:55	281553	63	<2	1.6	98	9.7	0.8	44	15.5	4.10	16.0	693
14/07/2009 18:13	15/07/2009 09:41	283469	91	<2	3.6	107	10.3	1.4	56	5.1	3.52	16.4	902
15/07/2009 12:40	16/07/2009 10:12	283926	51	<2	1.1	116	11.2	0.5	60	3.9	4.82	16.6	578
19/08/2009 11:27	19/08/2009 14:58	297977	21	<2	<0.1	92	8.8	4.4	26	17.0	5.83	17.3	563
20/08/2009 17:18	21/08/2009 08:53	299068	<10	3	10.1	98	9.4	7.9	36	2.0	8.21	17.0	675
26/08/2009 18:40	27/08/2009 08:50	301823	49	<2	1.8	100	9.5	1.2	49	6.5	3.22	16.5	3170
27/08/2009 10:39	28/08/2009 08:40	302517	30	<2	0.8	97	9.5	0.9	38	5.9	10.00	15.4	719
01/09/2009 17:05	02/09/2009 08:44	304099	20	<2	0.8	100	9.9	1.9	22	1.9	5.72	15.4	226
02/09/2009 12:54	02/09/2009 14:26	304537	21	<2	0.3	94	9.3	1.0	22	2.7	5.85	14.8	224
08/09/2009 15:55	09/09/2009 08:47	306730	59	<2	0.9	99	9.8	0.7	60	8.8	6.83	15.0	1050
09/09/2009 09:17	10/09/2009 08:49	307203	<10	<2	1.9	89	9.2	2.3	9	0.7	5.92	13.6	334
07/10/2009 15:17	08/10/2009 08:52	320418	32	<2	3.2	108	11.4	<0.1	30	6.1	5.76	12.0	408
08/10/2009 09:54	09/10/2009 08:58	321344	63	<2	0.3	99	10.4	0.9	40	11.5	6.70	11.9	563
27/10/2009 12:34	28/10/2009 08:44	328593	13	<2	0.1	101	10.8	0.3	27	2.1	6.22	12.2	895
29/10/2009 10:02	29/10/2009 11:36	329762	32	<2	0.3	99	10.5	1.0	24	2.7	7.69	12.7	962
11/11/2009 12:42	11/11/2009 14:47	337088	20	<2	0.3	96	11.3	0.5	45	2.1	5.48	8.4	957
12/11/2009 09:46	12/11/2009 11:11	337402	56	<2	<0.1	97	11.1	1.9	56	1.3	4.63	8.8	933
17/11/2009 16:29	18/11/2009 10:44	340164	42	<2	0.5	101	11.5	0.9	27	0.8	5.92	8.2	1080
19/11/2009 13:00	20/11/2009 09:12	341215	81	<2	1.5	99	10.7	<0.1	48	2.0	5.13	11.3	970

(130801) Liffey Estuary Lower, Dodder Grand Canal Basin- Depth Sample													
Sampling Point	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
Sampled Date			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 11:27	03/12/2008 16:41	191836	36	<2	0.4	101	12.2	0.2	45	29.1	1.22	6.6	289
04/12/2008 14:45	05/12/2008 10:00	192988	56	<2	1.2	97	11.4	0.9	38	28.9	0.93	6.6	354
11/12/2008 10:47	11/12/2008 14:44	195917	79	<2	0.1	97	12.0	0.6	37	28.9	1.86	5.9	430
20/01/2009 11:40	21/01/2009 08:18	206642	117	<2	<0.1	96	11.9	1.3	48	11.3	4.63	4.9	1450
22/01/2009 10:01	23/01/2009 08:24	208333	58	<2	0.4	95	11.1	0.4	36	31.7	0.85	6.7	220
28/01/2009 13:10	29/01/2009 08:22	210602	92	<2	0.7	93	11.1	0.3	31	31.5	0.84	7.2	214
29/01/2009 09:18	29/01/2009 11:46	210905	147	<2	0.4	94	11.3	0.6	40	24.2	2.95	6.9	1180
04/02/2009 10:47	04/02/2009 12:23	213228	115	<2	0.9	100	12.7	0.5	46	1.6	8.89	4.0	1970
05/02/2009 09:52	05/02/2009 14:33	213814	188	<2	0.5	99	12.6	0.6	89	8.1	6.34	4.3	1780
11/02/2009 13:52	12/02/2009 09:09	216053	102	<2	0.4	89	11.2	0.5	36	30.6	0.99	5.6	292
03/03/2009 15:43	04/03/2009 09:03	225391	73	<2	0.7	101	11.8	0.8	32	31.5	0.80	7.0	142
04/03/2009 10:52	05/03/2009 09:35	226285	126	<2	0.7	98	11.6	1.2	53	24.6	3.06	6.5	476
12/03/2009 12:19	13/03/2009 08:01	230285	33	<2	0.4	100	11.9	0.4	14	31.8	0.37	7.6	53
01/04/2009 15:49	02/04/2009 09:56	238999	40	<2	0.9	100	11.6	0.2	28	30.8	0.47	8.8	184
22/04/2009 12:02	23/04/2009 08:22	247057	138	<2	2.4	88	9.8	<0.1	64	30.5	0.42	10.7	265
14/05/2009 15:24	15/05/2009 10:53	255790	136	<2	0.9	88	9.4	1.2	75	29.7	0.46	11.8	205
27/05/2009 15:29	28/05/2009 08:33	262662	116	<2	0.8	84	9.0	2.0	50	32.1	0.43	12.1	57
09/06/2009 14:35	10/06/2009 08:31	268380	182	<2	1.2	79	8.2	1.2	71	29.1	0.89	13.4	163
18/06/2009 12:02	19/06/2009 08:27	272970	120	<2	1.8	94	9.5	1.3	57	15.7	4.55	15.0	816
10/07/2009 13:07	10/07/2009 08:55	281554	41	<2	<0.1	96	9.8	3.6	29	32.1	0.23	15.1	79
14/07/2009 18:15	15/07/2009 09:41	283470	63	<2	0.2	98	9.7	1.4	44	31.3	0.19	15.6	107
19/08/2009 11:29	19/08/2009 14:59	297978	54	<2	3.1	93	9.1	1.6	43	30.5	0.48	16.4	89
26/08/2009 18:42	27/08/2009 08:51	301824	18	<2	1.2	91	8.8	0.7	11	30.7	0.29	15.8	30
02/09/2009 12:55	02/09/2009 14:26	304538	75	<2	0.7	92	9.1	0.9	29	31.7	0.66	14.9	84
08/09/2009 15:56	09/09/2009 08:47	306731	34	<2	1.9	93	9.4	1.1	14	32.1	0.19	14.7	45
07/10/2009 15:10	08/10/2009 08:52	320419	61	<2	1.2	96	9.8	<0.1	32	31.7	0.25	13.7	125
08/10/2009 09:56	09/10/2009 08:58	321345	94	<2	0.8	106	10.7	1.5	32	31.7	<0.10	13.4	112
29/10/2009 10:03	29/10/2009 11:36	329784	74	<2	0.5	N.R.	N.R.	0.6	35	30.0	<0.10	N.R.	176
12/11/2009 09:50	12/11/2009 11:11	337403	81	<2	0.3	91	10.0	0.9	42	25.3	2.32	10.2	416
19/11/2009 13:04	20/11/2009 09:12	341216	44	<2	0.4	94	10.2	0.6	28	30.4	0.68	11.2	190
N.R. = No result													
This site was not sampled on the following dates: 10/12/08, 10/02/09, 23/04/09, 28/05/09, 09/06/09, 16/06/09, 08/07/09, 14/07/09, 26/07/09, 02/09/09, 08/09/09, 27/10/09, 10/11/09 and 20/11/09													

Sampling Point	(130810) Liffey Estuary Lower, East Link Toll Bridge - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia µg/l as N	B.O.D. Saline mg/l	Chlorophyll a mg/m3	D.O. % Sat.	D.O. mg/l	Pheophytin a mg/m3	P (React) µg/l SRP as P	Salinity PSU	Silica mg/l	Temp. °C	TON µg/l as N
03/12/2008 11:37	03/12/2008 16:41	191837	100	<2	0.3	96	12.0	0.4	30	6.3	3.62	5.3	1250
04/12/2008 14:54	05/12/2008 10:00	192989	78	<2	<0.1	98	11.7	4.5	42	8.3	2.51	5.9	1250
10/12/2008 14:08	10/12/2008 16:52	195244	56	<2	0.3	99	12.7	0.4	32	7.8	0.97	5.1	1938
11/12/2008 10:55	11/12/2008 14:44	195918	79	<2	0.3	99	12.6	0.4	36	6.5	3.58	4.8	1806
20/01/2009 11:44	21/01/2009 08:18	206643	86	<2	<0.1	98	12.2	1.7	58	4.8	6.36	4.6	2170
22/01/2009 10:09	23/01/2009 08:24	208334	49	<2	0.1	98	11.8	1.1	47	9.1	5.44	5.7	1430
28/01/2009 13:17	29/01/2009 08:22	210603	157	<2	0.1	98	12.0	0.4	38	3.7	6.74	6.5	1770
29/01/2009 09:24	29/01/2009 11:46	210906	146	<2	0.1	99	12.0	0.7	44	11.2	6.48	6.3	1590
04/02/2009 10:53	04/02/2009 12:23	213229	252	4	1.3	99	12.7	3.0	97	1.3	5.90	3.7	2030
05/02/2009 09:42	05/02/2009 14:33	213815	165	<2	0.4	99	12.6	0.8	92	4.7	5.59	4.2	1870
11/02/2009 13:39	12/02/2009 09:09	216054	111	<2	0.4	99	12.6	0.1	31	8.6	6.65	5.0	1790
11/02/2009 16:14	11/02/2009 09:41	215427	123	<2	0.5	98	12.6	0.2	17	6.0	6.10	4.3	1830
03/03/2009 15:47	04/03/2009 09:03	225392	71	<2	0.3	101	11.8	0.2	50	8.6	4.64	7.0	1650
04/03/2009 10:56	05/03/2009 09:35	226284	149	<2	0.9	100	11.9	0.3	57	9.2	5.02	6.5	1550
10/03/2009 15:38	11/03/2009 09:14	229153	52	<2	0.5	99	12.0	0.9	20	12.1	1.79	6.8	560
12/03/2009 12:31	13/03/2009 08:01	230286	48	<2	0.5	101	11.9	0.1	20	21.9	1.74	8.2	287
01/04/2009 15:55	02/04/2009 09:56	239000	72	<2	0.4	101	11.4	0.3	26	16.0	1.84	9.7	1260
02/04/2009 11:56	03/04/2009 08:45	239865	132	<2	0.8	98	11.2	0.4	26	13.3	2.26	9.3	1630
21/04/2009 15:14	22/04/2009 08:28	246183	94	<2	0.8	94	10.2	0.8	54	17.4	13.20	12.2	1280
22/04/2009 11:53	23/04/2009 08:22	247058	47	<2	1.2	92	9.9	0.5	35	6.5	3.57	12.1	1700
14/05/2009 11:15	14/05/2009 14:27	255555	99	<2	0.5	89	9.5	1.0	27	6.9	2.21	11.9	2160
14/05/2009 15:31	15/05/2009 10:53	255791	100	<2	0.9	93	9.8	0.7	33	10.5	1.61	12.4	182
27/05/2009 15:18	28/05/2009 08:33	262663	65	<2	0.3	94	9.8	1.0	52	18.1	3.28	13.3	773
28/05/2009 09:40	29/05/2009 08:32	263517	83	<2	0.7	88	9.2	1.6	64	12.4	4.24	13.6	953
09/06/2009 14:25	10/06/2009 08:31	268381	61	<2	0.5	95	9.6	0.9	58	3.7	6.44	14.2	1670
10/06/2009 10:01	11/06/2009 08:48	269236	65	<2	0.3	91	9.4	0.9	58	3.1	1.06	14.0	1290
16/06/2009 12:22	17/06/2009 08:40	271608	68	<2	1.5	91	9.1	1.4	53	13.1	5.02	16.0	946
18/06/2009 11:42	19/06/2009 08:27	272971	95	<2	0.7	94	9.6	0.8	54	9.6	6.23	14.6	975
08/07/2009 07:50	08/07/2009 09:11	280439	93	<2	1.2	78	7.7	1.4	67	18.7	3.52	15.9	757
10/07/2009 13:14	10/07/2009 08:55	281555	55	<2	1.6	100	10.0	0.9	43	23.9	2.68	15.4	514
14/07/2009 18:04	15/07/2009 09:41	283471	66	<2	1.5	101	9.7	1.0	71	5.7	3.77	16.5	1160
15/07/2009 12:49	16/07/2009 10:12	283927	29	<2	0.7	98	9.5	0.5	36	7.6	3.69	16.3	64
19/08/2009 11:39	19/08/2009 14:59	297979	38	<2	1.5	96	9.2	0.9	34	31.4	5.79	17.0	879
20/08/2009 17:25	21/08/2009 08:53	299069	99	<2	2.1	94	9.0	2.4	65	4.0	7.52	17.1	1010
26/08/2009 18:32	27/08/2009 08:51	301825	22	<2	1.1	101	9.7	1.4	25	16.1	5.01	16.1	499
27/08/2009 10:44	28/08/2009 08:40	302518	77	<2	0.9	92	9.0	0.7	68	11.4	6.01	15.6	1070
01/09/2009 17:14	02/09/2009 08:44	304100	37	<2	1.5	99	9.8	1.2	24	9.3	10.80	15.0	354
02/09/2009 12:46	02/09/2009 14:26	304539	27	<2	0.2	97	9.8	0.7	37	4.4	7.68	14.5	442
08/09/2009 15:45	09/09/2009 08:47	306732	63	<2	2.5	99	9.9	<0.1	56	17.5	3.79	14.8	409
09/09/2009 09:25	10/09/2009 08:49	307204	12	<2	0.8	90	9.2	0.7	8	15.3	4.41	14.3	253
07/10/2009 15:05	08/10/2009 08:52	320420	100	<2	0.4	103	10.6	1.7	92	9.0	5.38	13.0	1030
08/10/2009 09:40	09/10/2009 08:58	321346	96	<2	0.4	97	10.1	1.0	40	18.8	4.21	12.2	679
27/10/2009 12:24	28/10/2009 08:44	328595	17	<2	0.1	102	10.9	0.4	37	3.9	5.39	12.4	1260
29/10/2009 09:54	29/10/2009 11:36	329763	40	<2	0.5	101	10.6	0.5	28	2.1	0.64	12.9	1050
11/11/2009 12:48	11/11/2009 14:47	337089	32	<2	0.3	98	11.4	0.5	42	3.7	4.55	9.0	1040
12/11/2009 09:39	12/11/2009 11:11	337404	66	<2	1.0	98	11.1	1.6	53	4.2	4.65	9.2	947
17/11/2009 16:22	18/11/2009 10:44	340165	46	<2	0.3	101	11.4	1.4	48	4.7	6.00	8.8	1170
19/11/2009 13:10	20/11/2009 09:12	341217	74	<2	0.4	99	10.8	1.0	62	5.2	4.64	10.9	1080

(130811) Liffey Estuary Lower, East Link Toll Bridge - Depth Sample													
Sampling Point	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
Sampled Date			µg/l as N	mg/l	mg/m ³	% Sat.	mg/l	mg/m ³	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 11:39	03/12/2008 16:41	191838	35	<2	0.6	107	13.0	0.3	35	28.1	3.41	6.1	425
04/12/2008 14:56	05/12/2008 10:00	192990	33	<2	0.4	103	12.2	2.2	32	30.8	0.63	6.0	291
10/12/2008 14:10	10/12/2008 16:52	195245	58	<2	0.5	100	12.2	0.2	33	31.1	0.91	6.6	315
11/12/2008 10:56	11/12/2008 14:44	195919	52	<2	0.3	119	14.6	0.6	39	32.1	0.99	6.0	234
20/01/2009 11:56	21/01/2009 08:18	206644	95	<2	<0.1	90	10.5	1.9	38	32.6	1.11	7.2	167
22/01/2009 10:13	23/01/2009 08:24	208335	55	<2	<0.1	92	10.8	2.6	39	32.8	0.70	6.8	159
28/01/2009 13:19	29/01/2009 08:22	210604	131	<2	0.1	92	11.0	0.4	30	32.4	0.68	7.2	158
29/01/2009 09:27	29/01/2009 11:46	210907	157	<2	0.8	93	11.0	0.1	34	31.8	0.96	7.2	272
04/02/2009 10:55	04/02/2009 12:23	213230	294	<2	0.5	97	11.8	1.3	62	28.0	2.04	5.8	560
05/02/2009 09:37	05/02/2009 14:33	213816	201	<2	1.6	94	11.5	2.7	80	31.8	0.67	5.7	186
11/02/2009 13:41	12/02/2009 09:09	216055	89	<2	0.5	92	11.6	0.8	30	31.6	0.81	5.5	208
11/02/2009 16:17	11/02/2009 09:41	215428	126	<2	0.8	86	10.6	1.4	21	31.6	0.94	5.8	270
03/03/2009 15:50	04/03/2009 09:03	225393	82	<2	0.4	98	11.5	0.5	32	32.0	0.74	7.0	128
04/03/2009 10:57	05/03/2009 09:35	226283	73	<2	2.5	101	11.8	<0.1	39	31.7	0.66	6.8	144
10/03/2009 15:40	11/03/2009 09:14	229154	32	<2	0.7	93	11.3	0.5	10	32.6	0.21	6.8	26
12/03/2009 12:33	13/03/2009 08:01	230287	28	<2	0.5	99	11.9	0.5	13	32.4	0.46	7.4	56
01/04/2009 15:57	02/04/2009 09:56	239001	46	<2	0.7	97	11.3	0.1	29	31.6	0.42	8.6	130
02/04/2009 11:58	03/04/2009 08:45	239866	90	<2	1.5	94	11.0	1.1	38	31.3	<0.10	8.7	157
21/04/2009 15:16	22/04/2009 08:28	246184	218	<2	0.8	98	8.9	0.5	76	31.4	0.25	10.0	141
22/04/2009 11:55	23/04/2009 08:22	247059	192	<2	1.1	82	9.2	1.6	70	31.6	0.12	10.3	104
14/05/2009 11:17	14/05/2009 14:27	255556	110	<2	1.2	90	9.7	0.9	68	30.7	0.35	11.6	147
14/05/2009 15:32	15/05/2009 10:53	255792	102	<2	1.1	82	9.9	1.0	67	30.8	0.35	11.7	372
27/05/2009 15:20	28/05/2009 08:33	262664	88	<2	0.9	85	9.2	1.9	40	33.0	0.26	12.0	27
28/05/2009 09:41	29/05/2009 08:32	263518	77	<2	0.5	88	9.6	0.7	39	32.3	0.33	12.1	46
09/06/2009 14:27	10/06/2009 08:31	268362	120	<2	0.9	83	8.6	2.4	54	30.5	0.56	13.4	100
10/06/2009 10:03	11/06/2009 08:48	269237	114	<2	3.1	84	8.7	1.3	55	31.0	0.42	13.5	101
16/06/2009 12:23	17/06/2009 08:40	271609	94	<2	5.5	89	9.1	3.0	53	30.8	0.36	14.7	111
18/06/2009 11:46	19/06/2009 08:27	272972	148	<2	2.9	87	8.8	1.3	55	32.2	0.18	14.6	79
08/07/2009 07:52	08/07/2009 09:11	280440	115	<2	2.8	82	8.2	3.1	59	32.7	0.20	15.3	37
10/07/2009 13:17	10/07/2009 08:55	281556	38	<2	1.9	98	10.0	0.9	27	32.5	0.16	14.9	62
14/07/2009 18:06	15/07/2009 09:41	283472	87	<2	<0.1	93	9.2	5.2	46	32.1	<0.10	15.4	72
15/07/2009 12:50	16/07/2009 10:12	283928	77	<2	1.5	93	9.2	<0.1	211	32.4	<0.10	15.4	459
19/08/2009 11:40	19/08/2009 14:59	297980	21	<2	0.9	94	9.2	2.1	18	31.5	0.38	16.3	79
20/08/2009 17:27	21/08/2009 08:53	299070	82	<2	2.0	81	7.9	1.1	34	31.7	0.37	16.2	80
26/08/2009 18:34	27/08/2009 08:51	301826	26	<2	0.4	90	8.8	0.8	16	31.7	0.20	15.7	27
27/08/2009 10:45	28/08/2009 08:40	302519	58	<2	1.2	92	9.0	0.4	28	31.0	0.36	15.6	62
01/09/2009 17:15	02/09/2009 08:44	304101	42	<2	1.2	91	9.0	0.8	11	32.4	0.50	15.0	100
02/09/2009 12:47	02/09/2009 14:26	304540	49	<2	0.7	90	9.0	1.7	20	32.8	0.32	14.9	35
08/09/2009 15:47	09/09/2009 08:47	306733	28	<2	3.5	93	9.3	<0.1	11	33.6	0.11	14.7	30
09/09/2009 09:26	10/09/2009 08:49	307205	36	<2	0.4	86	8.8	1.7	9	33.2	<0.10	14.6	32
07/10/2009 15:10	08/10/2009 08:52	320421	70	<2	1.6	N.R.	N.R.	2.8	32	32.1	0.14	13.9	90
08/10/2009 09:42	09/10/2009 08:58	321347	84	<2	1.2	104	10.5	1.6	32	32.6	0.22	13.2	91
27/10/2009 12:26	28/10/2009 08:44	328594	78	<2	0.1	94	9.8	0.3	35	32.0	0.48	13.0	132
29/10/2009 09:56	29/10/2009 11:36	329764	101	<2	0.1	92	9.6	1.0	34	32.1	0.36	13.1	98
11/11/2009 12:53	11/11/2009 14:47	337090	120	<2	0.1	84	9.2	0.6	47	32.1	0.60	10.9	149
12/11/2009 09:41	12/11/2009 11:11	337405	56	<2	0.8	94	10.3	1.2	34	31.4	0.56	10.7	182
17/11/2009 16:24	18/11/2009 10:44	340166	43	<2	0.7	92	10.0	0.2	29	31.7	0.52	10.7	149
19/11/2009 13:11	20/11/2009 09:12	341218	45	<2	1.7	92	10.0	3.1	35	32.4	0.46	11.2	134

N.R. = No result

(130820) Liffey Estuary Lower, RO RO Ramp No. 5 (Old TW Outfall) - Surface Sample													
Sampling Point	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
Sampled Date			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 11:48	03/12/2008 16:41	191839	36	<2	0.3	96	11.7	0.5	31	21.5	0.54	6.4	722
04/12/2008 16:15	05/12/2008 10:00	192991	64	<2	0.7	98	11.5	1.7	37	28.7	0.55	6.7	838
10/12/2008 14:28	10/12/2008 16:52	195246	53	<2	<0.1	100	12.6	0.6	31	12.6	0.96	5.8	1360
11/12/2008 12:08	11/12/2008 14:44	195920	71	<2	0.1	98	12.4	0.5	35	10.6	3.26	5.2	1396
20/01/2009 12:06	21/01/2009 08:18	206645	86	<2	<0.1	98	11.9	1.3	52	15.2	3.81	5.3	1390
22/01/2009 10:26	23/01/2009 08:24	208336	49	<2	<0.1	100	11.8	1.8	42	21.3	2.95	6.3	992
28/01/2009 13:31	29/01/2009 08:22	210605	122	<2	<0.1	99	11.9	1.3	33	17.7	2.00	7.4	573
29/01/2009 09:43	29/01/2009 11:46	210908	487	<2	1.1	97	11.5	0.2	101	26.9	1.86	7.3	488
04/02/2009 11:06	04/02/2009 12:23	213231	1420	13	0.5	98	12.4	1.9	297	4.1	7.14	4.5	2850
05/02/2009 09:27	05/02/2009 14:33	213817	160	<2	0.5	99	12.4	1.1	80	7.5	5.56	4.5	1810
11/02/2009 13:20	12/02/2009 09:09	216056	129	<2	0.4	97	12.3	0.3	36	17.7	4.31	5.3	1170
11/02/2009 16:31	11/02/2009 09:41	215429	102	<2	0.3	97	12.2	0.4	15	13.7	4.83	5.0	1300
03/03/2009 15:58	04/03/2009 09:03	225394	62	<2	0.4	107	12.2	0.6	32	28.6	10.40	7.8	288
04/03/2009 11:04	05/03/2009 09:35	226282	116	<2	0.4	101	12.0	0.9	48	18.8	3.58	6.3	940
10/03/2009 16:01	11/03/2009 09:14	229155	32	<2	0.8	105	11.8	0.1	18	22.0	1.17	9.1	328
12/03/2009 12:48	13/03/2009 08:01	230288	38	<2	0.4	102	12.0	0.3	19	28.1	0.57	8.1	130
01/04/2009 14:48	02/04/2009 09:56	239002	49	<2	0.4	107	11.8	<0.1	32	29.2	0.59	11.3	273
02/04/2009 12:12	03/04/2009 08:45	239867	106	<2	1.2	102	11.5	0.4	46	28.8	0.70	10.0	558
21/04/2009 14:19	22/04/2009 08:28	246185	121	<2	0.6	96	10.3	0.7	66	23.3	0.99	12.4	700
22/04/2009 11:42	23/04/2009 08:22	247060	115	<2	0.6	99	10.8	1.8	67	28.9	0.27	11.7	178
14/05/2009 11:34	14/05/2009 14:27	255557	96	<2	0.5	94	10.0	1.3	52	16.7	0.87	12.2	823
14/05/2009 15:41	15/05/2009 10:53	255793	99	<2	1.7	104	10.6	0.3	62	25.6	0.54	14.0	372
27/05/2009 15:07	28/05/2009 08:33	262665	60	<2	0.8	96	10.0	0.5	33	29.5	1.39	13.4	160
28/05/2009 09:57	29/05/2009 08:32	263519	83	<2	0.4	91	9.5	0.5	45	24.3	2.13	13.7	294
09/06/2009 13:51	10/06/2009 08:31	268383	82	<2	0.7	96	9.5	0.6	65	28.4	6.09	15.3	1500
10/06/2009 10:12	11/06/2009 08:48	269238	109	<2	0.3	91	9.2	0.4	65	27.2	3.96	14.6	733
16/06/2009 11:52	17/06/2009 08:40	271610	53	<2	3.2	104	10.2	0.6	43	24.7	3.18	16.4	494
18/06/2009 11:30	19/06/2009 08:27	272973	84	<2	1.7	106	10.4	0.9	42	21.3	3.01	16.3	445
08/07/2009 07:40	08/07/2009 09:11	280441	53	<2	1.2	98	9.8	0.8	42	25.1	1.61	15.8	403
10/07/2009 13:27	10/07/2009 08:55	281577	29	<2	1.9	112	10.9	0.6	32	29.4	1.39	16.9	246
14/07/2009 17:53	15/07/2009 09:41	283473	38	<2	3.2	104	10.2	0.5	49	27.4	0.55	15.9	308
15/07/2009 12:55	16/07/2009 10:12	283929	126	<2	1.5	105	10.4	0.6	116	21.2	1.74	15.7	180
19/08/2009 11:49	19/08/2009 14:59	297981	<10	<2	<0.1	98	9.4	4.6	27	24.8	3.52	17.0	431
20/08/2009 17:38	21/08/2009 08:53	299071	43	<2	1.6	94	9.0	1.1	46	16.3	4.75	17.0	850
26/08/2009 18:14	27/08/2009 08:51	301827	28	<2	1.6	99	9.6	0.8	24	30.9	3.35	15.8	98
27/08/2009 10:55	28/08/2009 08:40	302520	24	<2	1.3	96	9.4	0.3	19	19.8	4.26	15.5	203
01/09/2009 17:27	02/09/2009 08:44	304102	30	<2	1.2	98	9.8	1.5	15	20.3	3.82	15.2	160
02/09/2009 12:33	02/09/2009 14:26	304541	32	<2	1.1	99	9.9	0.6	26	30.5	3.31	14.9	117
08/09/2009 15:33	09/09/2009 08:47	306734	54	<2	4.0	99	9.9	<0.1	45	24.7	3.12	15.0	244
09/09/2009 09:35	10/09/2009 08:49	307206	<10	<2	2.3	95	9.7	<0.1	<5	22.6	3.26	14.2	256
07/10/2009 14:15	08/10/2009 08:52	320422	51	<2	0.4	124	11.8	0.9	32	22.4	2.10	16.6	413
08/10/2009 09:26	09/10/2009 08:58	321348	63	<2	<0.1	110	11.0	2.1	30	25.7	2.08	13.8	336
27/10/2009 13:10	28/10/2009 08:44	328597	35	<2	0.3	102	10.8	0.4	40	16.8	2.40	13.0	776
29/10/2009 09:44	29/10/2009 11:36	329765	58	<2	<0.1	100	10.5	1.5	31	13.9	<0.10	13.3	775
11/11/2009 13:02	11/11/2009 14:47	337091	59	<2	0.7	99	11.2	0.7	38	13.1	3.46	9.7	909
12/11/2009 09:29	12/11/2009 11:11	337406	109	<2	0.3	100	11.0	0.6	54	6.6	4.24	10.4	965
17/11/2009 16:08	18/11/2009 10:44	340167	40	<2	<0.1	100	11.2	0.8	37	13.2	3.82	9.4	876
19/11/2009 14:30	20/11/2009 09:12	341219	65	<2	0.8	98	10.7	2.3	54	10.3	3.85	11.2	939

(130821) Liffey Estuary Lower, RO RO Ramp No. 5 (Old TW Outfall) - Depth Sample													
Sampling Point	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
Sampled Date			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 11:59	03/12/2008 16:41	191840	12	<2	0.3	N.R.	N.R.	0.7	30	33.4	0.64	5.7	181
04/12/2008 16:16	05/12/2008 10:00	192992	20	<2	0.3	99	11.6	2.1	31	31.8	0.75	7.0	218
10/12/2008 14:30	10/12/2008 16:52	195247	64	<2	0.4	103	12.7	0.4	33	31.8	0.86	6.6	257
11/12/2008 12:10	11/12/2008 14:44	195921	38	<2	<0.1	108	13.4	0.7	32	32.3	0.91	6.0	228
20/01/2009 12:12	21/01/2009 08:18	206646	42	<2	0.1	93	11.0	1.6	31	32.7	1.03	6.6	223
22/01/2009 10:28	23/01/2009 08:24	208337	36	<2	<0.1	97	11.3	0.9	30	32.8	N.R.	7.2	169
28/01/2009 13:33	29/01/2009 08:22	210606	100	<2	0.3	94	11.3	0.6	24	33.3	0.47	7.3	109
29/01/2009 09:50	29/01/2009 11:46	210909	180	<2	1.1	94	11.2	0.6	39	32.2	0.64	7.4	138
04/02/2009 11:08	04/02/2009 12:23	213232	376	2	0.7	99	12.1	1.3	94	23.1	3.42	5.7	1240
05/02/2009 09:24	05/02/2009 14:33	213818	136	<2	0.1	98	11.9	0.9	52	32.2	0.54	5.9	151
11/02/2009 13:22	12/02/2009 09:09	216057	68	<2	0.5	93	11.8	0.2	30	31.9	0.74	5.4	181
11/02/2009 16:34	11/02/2009 09:41	215430	76	<2	0.5	91	11.8	0.3	13	31.6	0.80	5.6	205
03/03/2009 16:00	04/03/2009 09:04	225395	48	<2	0.9	100	11.8	0.5	30	32.7	0.63	6.8	106
04/03/2009 11:06	05/03/2009 09:35	226281	77	<2	1.2	100	11.8	<0.1	44	32.0	0.81	6.6	128
10/03/2009 16:03	11/03/2009 09:14	229156	49	<2	0.5	98	11.8	0.3	56	32.4	0.24	7.0	37
12/03/2009 12:50	13/03/2009 08:01	230289	12	<2	0.4	100	11.9	0.3	9	33.2	0.26	7.5	27
01/04/2009 14:49	02/04/2009 09:56	239003	29	<2	0.3	98	11.4	0.1	23	32.8	0.28	9.0	76
02/04/2009 12:13	03/04/2009 08:46	239868	50	<2	0.8	97	11.3	0.1	29	32.6	0.34	8.7	89
21/04/2009 14:20	22/04/2009 08:28	246186	62	<2	1.2	94	10.5	0.4	40	32.1	0.43	10.5	97
22/04/2009 11:43	23/04/2009 08:22	247061	46	<2	1.2	96	10.7	1.4	36	32.6	0.16	10.4	61
14/05/2009 11:35	14/05/2009 14:27	255558	92	<2	2.1	92	9.8	0.8	67	30.4	0.34	11.7	161
14/05/2009 15:42	15/05/2009 10:53	255794	111	<2	1.6	88	9.4	0.7	66	32.0	0.28	11.5	86
27/05/2009 15:08	28/05/2009 08:33	262666	26	<2	0.8	94	10.1	0.3	18	33.4	0.11	11.7	12
28/05/2009 09:58	29/05/2009 08:32	263520	49	<2	0.9	90	9.7	0.1	27	32.8	0.20	12.2	25
09/06/2009 13:53	10/06/2009 08:31	268384	89	<2	2.3	85	8.8	2.0	53	31.3	0.40	13.3	69
10/06/2009 10:13	11/06/2009 08:48	269239	93	<2	1.1	87	8.9	1.9	57	30.6	0.52	13.7	124
16/06/2009 11:53	17/06/2009 08:40	271611	39	<2	4.8	100	10.2	1.3	29	31.9	0.16	14.8	79
18/06/2009 11:31	19/06/2009 08:27	272974	59	<2	1.9	99	10.1	0.5	24	32.5	0.14	14.4	52
08/07/2009 07:41	08/07/2009 09:11	280442	25	<2	1.7	102	10.2	0.4	25	32.6	0.13	15.1	53
10/07/2009 13:29	10/07/2009 08:55	281607	10	<2	2.4	103	10.5	0.5	26	33.2	<0.10	14.9	34
14/07/2009 17:55	15/07/2009 09:41	283474	25	<2	2.8	104	10.3	0.4	31	32.7	<0.10	15.2	42
15/07/2009 13:09	16/07/2009 10:12	283930	24	<2	<0.1	102	10.1	7.6	14	31.8	0.10	15.5	<10
19/08/2009 11:50	19/08/2009 14:59	297982	<10	<2	3.9	98	9.6	<0.1	<5	32.4	0.18	16.1	21
20/08/2009 17:40	21/08/2009 08:53	299072	41	<2	1.7	96	9.3	1.2	32	31.6	0.33	16.1	23
26/08/2009 18:16	27/08/2009 08:51	301828	<10	<2	1.6	101	9.8	1.0	9	32.2	0.13	15.7	19
27/08/2009 10:56	28/08/2009 08:40	302521	16	<2	1.2	96	9.5	3.4	20	31.9	0.26	15.6	31
01/09/2009 17:28	02/09/2009 08:44	304103	19	<2	1.2	97	9.7	1.1	10	32.5	0.32	15.1	61
02/09/2009 12:35	02/09/2009 14:26	304542	31	<2	<0.1	99	9.9	2.2	23	33.4	0.33	14.7	56
08/09/2009 15:34	09/09/2009 08:47	306735	13	<2	<0.1	97	9.7	3.4	10	34.1	<0.10	14.9	17
09/09/2009 09:37	10/09/2009 08:49	307207	12	<2	1.1	96	9.8	1.2	10	33.4	0.15	14.6	44
07/10/2009 14:18	08/10/2009 08:52	320423	28	<2	1.3	104	10.7	1.6	21	32.8	<0.10	13.3	36
08/10/2009 09:27	09/10/2009 08:58	321349	41	<2	0.8	109	11.0	2.5	23	32.0	0.15	13.6	75
27/10/2009 12:13	28/10/2009 08:44	328596	44	<2	<0.1	100	10.5	0.5	38	31.3	0.70	13.0	237
29/10/2009 09:46	29/10/2009 11:36	329766	28	<2	0.5	101	10.5	0.3	15	32.8	2.41	13.3	82
11/11/2009 13:04	11/11/2009 14:47	337092	23	<2	0.5	94	10.4	0.1	24	32.0	0.43	10.7	150
12/11/2009 09:30	12/11/2009 11:11	337407	24	<2	0.5	99	10.9	1.3	26	31.6	0.49	10.7	169
17/11/2009 16:10	18/11/2009 10:44	340168	28	<2	0.7	97	10.4	0.7	27	32.1	0.37	10.7	115
19/11/2009 14:31	20/11/2009 09:12	341220	23	<2	0.9	98	10.5	0.6	21	32.4	0.36	11.6	120

N.R.= No result

(130830) Liffey Estuary Lower, Ringsend Cascade - Surface Sample													
Sampling Point	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
Sampled Date			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 12:51	03/12/2008 17:04	191861	29	<2	0.7	101	11.9	0.3	31	22.9	3.63	7.8	604
04/12/2008 16:05	05/12/2008 10:00	192993	747	<2	0.4	101	10.6	1.7	464	25.3	1.18	11.1	1000
10/12/2008 14:39	10/12/2008 16:52	195248	168	<2	<0.1	100	11.6	0.6	155	23.8	2.27	9.0	1232
11/12/2008 11:46	11/12/2008 14:44	195922	168	<2	0.3	104	12.0	0.2	118	23.7	2.57	8.9	1136
20/01/2009 12:23	21/01/2009 08:18	206647	452	<2	<0.1	98	11.5	1.3	140	26.6	2.22	6.9	693
22/01/2009 10:36	23/01/2009 08:24	208338	1050	<2	<0.1	100	11.3	1.9	288	27.5	4.26	8.4	793
28/01/2009 11:30	29/01/2009 11:22	210607	1576	<2	<0.1	103	11.3	0.5	304	23.6	1.94	10.7	764
29/01/2009 10:06	29/01/2009 11:47	210910	92	<2	9.6	99	11.8	<0.1	19	33.2	0.49	7.0	95
04/02/2009 11:16	04/02/2009 12:23	213233	426	3	1.1	99	12.4	1.7	125	9.4	4.89	4.5	1720
05/02/2009 09:16	05/02/2009 14:33	213819	284	<2	0.2	98	12.4	1.2	110	11.4	4.71	4.3	1540
11/02/2009 13:08	12/02/2009 09:09	216058	393	<2	0.1	102	11.8	0.6	69	23.8	3.51	8.8	689
11/02/2009 16:47	11/02/2009 09:41	215431	1920	<2	0.3	100	13.5	0.4	251	24.1	3.56	8.7	802
03/03/2009 16:57	04/03/2009 09:04	225396	2880	10	0.8	103	11.6	0.4	310	26.8	2.17	8.6	798
04/03/2009 11:11	05/03/2009 09:35	226280	1030	<2	<0.1	104	12.0	1.0	149	28.4	1.97	7.4	451
10/03/2009 16:12	11/03/2009 09:14	229157	595	<2	0.7	104	12.0	0.2	201	27.9	0.83	8.8	478
12/03/2009 13:02	13/03/2009 08:01	230290	804	<2	0.4	107	11.9	0.4	120	28.5	1.87	10.3	275
01/04/2009 14:37	02/04/2009 09:56	239004	747	3	1.1	101	11.5	0.3	384	29.8	1.31	9.7	468
02/04/2009 12:30	03/04/2009 08:46	239869	185	<2	0.3	100	11.5	1.2	74	30.9	0.64	9.6	220
21/04/2009 14:05	22/04/2009 08:28	246187	507	<2	1.6	101	10.6	0.6	301	28.0	8.29	13.4	819
22/04/2009 11:31	23/04/2009 08:22	247062	512	<2	1.6	100	10.9	1.6	337	31.5	0.85	11.6	728
14/05/2009 11:55	14/05/2009 14:27	255559	242	<2	0.9	92	9.8	0.7	169	28.7	0.66	12.2	727
14/05/2009 17:23	14/05/2009 09:32	255282	249	<2	0.8	94	10.0	1.0	243	28.8	<0.10	12.1	616
27/05/2009 14:56	28/05/2009 08:33	262667	1540	3	0.3	96	9.7	0.9	575	26.6	2.60	14.7	1670
28/05/2009 10:19	29/05/2009 08:32	263521	129	<2	0.7	92	9.7	0.6	81	30.2	1.32	13.5	249
09/06/2009 12:58	10/06/2009 08:31	268385	271	<2	1.2	97	9.4	0.9	467	19.5	4.07	16.7	1520
10/06/2009 10:21	11/06/2009 08:48	269240	301	<2	0.5	92	9.2	0.4	186	24.6	3.06	15.1	729
16/06/2009 11:43	17/06/2009 08:40	271612	103	<2	2.8	106	10.4	0.7	163	29.5	1.53	16.6	537
18/06/2009 11:18	19/06/2009 08:27	272975	139	<2	0.7	105	10.2	<0.1	316	27.6	3.49	16.4	812
08/07/2009 07:29	08/07/2009 09:11	280443	51	<2	1.3	100	10.0	0.4	118	30.7	1.11	15.5	342
10/07/2009 11:55	10/07/2009 08:55	281608	174	<2	1.6	106	10.2	0.5	388	29.4	1.99	17.2	752
14/07/2009 17:43	15/07/2009 09:41	283475	605	>6	1.6	101	9.3	0.5	443	25.0	1.34	18.8	1090
15/07/2009 13:19	16/07/2009 10:12	283931	23	<2	1.2	106	10.0	2.7	13	28.0	0.61	17.8	<10
19/08/2009 12:45	19/08/2009 14:59	297983	177	<2	1.3	100	9.4	0.7	380	27.7	3.11	18.1	698
20/08/2009 17:49	21/08/2009 08:53	299073	131	<2	1.7	97	9.3	0.8	105	26.4	3.08	17.1	524
26/08/2009 18:07	27/08/2009 08:51	301829	206	<2	1.1	100	9.6	1.1	246	29.4	3.16	16.1	502
27/08/2009 11:02	28/08/2009 08:40	302522	40	<2	2.0	96	9.4	1.5	77	29.4	2.80	15.9	183
01/09/2009 17:35	02/09/2009 08:44	304104	31	<2	2.1	104	10.1	1.2	42	29.6	3.19	16.0	148
02/09/2009 12:21	02/09/2009 14:26	304543	124	<2	0.8	104	9.7	1.0	155	28.8	3.02	18.2	348
08/09/2009 15:23	09/09/2009 08:47	306736	359	<2	2.5	103	9.6	<0.1	391	28.5	3.42	18.3	598
09/09/2009 09:47	10/09/2009 08:49	307208	<10	<2	1.7	96	9.5	0.7	64	30.5	2.78	16.0	256
07/10/2009 12:06	08/10/2009 08:52	320424	50	<2	0.9	107	10.8	0.7	35	25.1	2.17	13.5	522
08/10/2009 09:16	09/10/2009 08:58	321350	119	<2	0.5	107	10.8	2.1	114	29.8	1.22	13.6	498
27/10/2009 13:01	28/10/2009 08:44	328599	128	<2	0.7	98	10.2	0.5	115	24.4	2.46	24.4	739
29/10/2009 09:33	29/10/2009 11:36	329767	554	<2	0.3	105	10.5	0.7	387	29.0	0.15	15.5	1190
11/11/2009 13:11	11/11/2009 14:47	337093	100	<2	0.4	96	10.6	0.3	94	26.0	1.35	10.7	628
12/11/2009 09:20	12/11/2009 11:11	337408	152	<2	0.4	100	10.4	0.9	367	23.7	1.94	12.8	1270
17/11/2009 15:58	18/11/2009 10:44	340169	193	<2	0.4	103	10.8	0.2	152	21.4	2.35	11.7	945
19/11/2009 14:19	20/11/2009 09:12	341221	81	<2	0.3	99	10.6	1.0	40	22.8	1.82	11.7	498

(130831) Liffey Estuary Lower, Ringsend Cascade - Depth Sample													
Sampling Point	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
Sampled Date			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
03/12/2008 12:53	03/12/2008 16:41	191841	30	<2	0.4	118	14.1	0.3	33	32.5	0.78	6.9	205
04/12/2008 16:06	05/12/2008 10:00	192994	102	<2	0.8	98	10.9	1.5	85	32.3	0.56	8.5	268
10/12/2008 14:39	10/12/2008 16:52	195249	115	<2	0.4	100	11.8	0.4	115	29.0	0.71	8.0	692
11/12/2008 11:48	11/12/2008 14:44	195923	36	<2	0.3	102	12.1	0.6	34	32.4	0.62	7.6	192
20/01/2009 12:28	21/01/2009 08:18	206648	90	<2	0.2	93	11.0	5.1	46	32.2	1.01	6.7	272
22/01/2009 10:41	23/01/2009 08:24	208339	68	<2	0.1	97	11.3	1.0	38	32.5	0.82	7.2	222
28/01/2009 11:31	29/01/2009 08:22	210608	134	<2	0.9	95	11.3	<0.1	33	33.3	0.46	7.6	112
29/01/2009 10:19	29/01/2009 11:47	210911	122	<2	0.4	98	11.7	0.4	28	33.3	0.50	7.0	102
04/02/2009 11:19	04/02/2009 12:23	213234	805	3	0.6	98	11.9	0.8	162	16.6	4.50	6.0	1510
05/02/2009 09:15	05/02/2009 14:33	213820	234	<2	0.5	97	11.8	1.0	84	30.5	2.92	5.9	730
11/02/2009 13:09	12/02/2009 09:09	216059	117	<2	0.4	94	11.9	0.8	36	31.5	0.82	5.6	179
11/02/2009 16:50	11/02/2009 09:41	215432	221	<2	0.5	94	11.9	0.7	34	29.8	1.16	5.8	306
03/03/2009 17:00	04/03/2009 09:04	225397	147	<2	1.1	102	11.8	1.0	46	32.3	0.68	7.1	129
04/03/2009 11:13	05/03/2009 09:35	226279	499	<2	2.3	98	11.5	<0.1	130	30.2	1.56	7.1	255
10/03/2009 16:14	11/03/2009 09:15	229159	49	<2	0.5	101	12.0	0.7	21	30.6	0.34	7.4	53
12/03/2009 13:03	13/03/2009 08:01	230291	26	<2	0.7	96	11.5	0.4	16	33.1	0.16	7.6	24
01/04/2009 14:38	02/04/2009 09:56	239005	<10	<2	0.7	100	11.7	0.5	16	32.9	0.25	8.5	62
02/04/2009 12:32	03/04/2009 08:46	239870	113	<2	0.5	99	11.5	0.1	50	31.6	0.40	9.1	143
21/04/2009 14:06	22/04/2009 08:28	246188	119	<2	1.0	93	10.3	0.7	66	30.6	0.25	11.0	184
22/04/2009 11:32	23/04/2009 08:22	247063	22	<2	1.0	102	11.4	0.7	32	32.5	0.63	10.4	63
14/05/2009 11:56	14/05/2009 14:27	255560	117	<2	1.0	92	9.9	1.0	88	31.1	0.32	11.5	230
14/05/2009 17:25	14/05/2009 09:32	255283	128	<2	1.1	91	9.8	2.1	102	31.4	0.34	11.6	215
27/05/2009 14:57	28/05/2009 08:33	262688	82	<2	1.6	91	9.8	0.5	35	32.9	0.17	12.1	52
28/05/2009 10:20	29/05/2009 08:32	263522	71	<2	<0.1	91	9.7	0.9	39	31.7	0.35	12.9	87
09/06/2009 13:00	10/06/2009 08:31	268386	76	<2	2.5	92	9.4	0.8	45	30.7	0.41	13.6	96
10/06/2009 10:24	11/06/2009 08:48	269241	119	<2	1.6	88	9.0	3.3	54	31.2	<0.10	13.8	97
16/06/2009 11:45	17/06/2009 08:41	271613	33	<2	2.7	102	10.4	0.8	25	32.8	0.10	14.6	48
18/06/2009 11:20	19/06/2009 08:27	272976	49	<2	1.3	100	10.2	0.6	23	32.0	0.11	14.5	76
08/07/2009 07:31	08/07/2009 09:11	280444	63	<2	2.1	88	8.9	0.4	44	32.2	0.17	15.1	61
10/07/2009 11:57	10/07/2009 08:55	281609	50	<2	2.4	97	9.8	0.9	37	33.0	<0.10	14.9	27
14/07/2009 17:45	15/07/2009 09:41	283476	33	<2	2.4	103	10.2	1.0	34	33.5	<0.10	15.2	<10
15/07/2009 13:20	16/07/2009 10:12	283932	27	<2	2.5	98	9.5	1.6	88	30.0	0.34	16.6	1500
19/08/2009 12:46	19/08/2009 14:59	297984	<10	<2	2.1	99	9.7	0.9	<5	32.6	0.14	16.0	<10
20/08/2009 17:50	21/08/2009 08:53	299074	70	2	1.9	93	9.0	0.9	57	31.0	0.28	16.3	110
26/08/2009 18:08	27/08/2009 08:51	301830	24	<2	1.2	95	9.3	0.6	20	32.0	0.34	15.7	38
27/08/2009 11:03	28/08/2009 08:40	302523	25	<2	3.2	96	9.4	1.4	27	31.1	0.28	15.7	67
01/09/2009 17:37	02/09/2009 08:44	304105	34	<2	3.5	99	9.8	1.0	18	32.1	0.48	15.3	107
02/09/2009 12:24	02/09/2009 14:26	304544	12	<2	1.3	101	10.0	1.0	8	33.1	<0.10	15.3	22
08/09/2009 15:24	09/09/2009 08:47	306737	29	<2	1.2	95	9.4	1.1	17	34.4	<0.10	15.2	31
09/09/2009 09:49	10/09/2009 08:49	307209	21	<2	1.5	91	9.3	0.7	8	32.5	0.21	14.7	56
07/10/2009 12:03	08/10/2009 08:52	320425	20	<2	0.9	107	11.0	1.4	16	32.6	<0.10	12.9	18
08/10/2009 09:18	09/10/2009 08:58	321351	65	<2	1.7	107	10.9	0.9	34	31.8	0.19	13.2	122
27/10/2009 13:02	28/10/2009 08:44	328598	33	<2	0.3	101	10.6	0.6	31	32.4	0.36	13.1	137
29/10/2009 09:34	29/10/2009 11:36	329768	36	<2	0.3	101	10.5	0.8	23	33.1	1.70	13.5	71
11/11/2009 13:12	11/11/2009 14:47	337094	25	<2	0.4	96	10.6	0.4	28	30.6	0.64	11.0	207
12/11/2009 09:22	12/11/2009 11:11	337409	48	<2	0.4	95	10.3	0.4	30	32.2	0.39	11.0	142
17/11/2009 15:59	18/11/2009 10:44	340170	44	<2	0.4	98	10.6	0.5	38	29.6	0.84	10.8	263
19/11/2009 14:21	20/11/2009 09:12	341222	44	<2	0.5	96	10.2	1.1	27	33.0	<0.10	11.8	108

Sampling Point	(130840) Liffey Estuary Lower, Poolbeg Lighthouse - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia µg/l as N	B.O.D. Saline mg/l	Chlorophyll a mg/m3	D.O. % Sat.	D.O. mg/l	Pheophytin a mg/m3	P (React) µg/l SRP as P	Salinity PSU	Silica mg/l	Temp. °C	TON µg/l as N
03/12/2008 13:10	03/12/2008 16:41	191842	63	<2	0.5	97	11.5	<0.1	98	33.7	0.61	7.5	477
04/12/2008 15:55	05/12/2008 10:00	192995	427	<2	0.4	99	11.1	1.3	261	27.1	1.13	8.4	684
10/12/2008 14:49	10/12/2008 16:52	195250	150	<2	0.3	98	11.8	0.4	112	27.0	4.29	7.3	754
11/12/2008 11:54	11/12/2008 14:44	195924	568	<2	0.5	100	11.7	0.3	280	23.6	1.64	8.3	1442
20/01/2009 12:38	21/01/2009 08:18	206649	224	<2	0.1	97	11.6	1.0	75	27.7	1.68	6.2	489
22/01/2009 12:41	23/01/2009 08:24	208340	256	<2	<0.1	99	11.4	1.1	86	29.2	1.42	7.6	579
28/01/2009 11:19	29/01/2009 08:41	210609	77	<2	<0.1	98	11.6	0.9	19	33.4	0.49	7.5	93
04/02/2009 11:25	04/02/2009 12:23	213235	888	3	0.6	99	12.1	1.0	154	15.2	4.52	5.5	1570
05/02/2009 09:08	05/02/2009 14:38	213853	351	<2	0.2	100	12.3	0.7	127	12.4	5.02	5.2	1660
11/02/2009 12:48	12/02/2009 09:09	216060	837	<2	0.3	98	12.0	0.8	119	27.0	2.73	6.7	387
11/02/2009 17:04	11/02/2009 09:41	215433	370	<2	0.3	96	11.9	0.5	51	26.1	2.87	5.8	498
03/03/2009 16:45	04/03/2009 09:32	225417	426	<2	0.8	104	12.7	0.2	87	31.8	0.86	7.1	183
04/03/2009 11:19	05/03/2009 09:35	226278	18	<2	0.8	103	12.3	0.2	26	32.9	0.60	6.2	100
10/03/2009 16:22	11/03/2009 09:15	229160	210	<2	0.8	101	12.1	0.1	54	31.4	0.69	7.3	147
12/03/2009 13:17	13/03/2009 08:04	230292	244	<2	0.4	103	12.0	0.5	61	31.5	0.39	8.4	80
01/04/2009 14:26	02/04/2009 09:56	239006	<10	<2	0.1	100	11.9	0.3	11	33.0	0.25	8.3	58
02/04/2009 12:46	03/04/2009 08:46	239871	41	<2	0.7	102	11.8	0.1	25	32.6	0.29	8.9	72
21/04/2009 13:54	22/04/2009 08:28	246189	331	<2	2.1	100	10.6	0.5	224	29.2	0.35	12.8	644
22/04/2009 11:21	23/04/2009 08:22	247064	38	<2	0.9	101	11.2	2.5	40	32.3	<0.10	10.6	73
14/05/2009 12:11	14/05/2009 14:27	255561	44	<2	2.9	98	10.6	1.1	41	32.1	0.17	11.4	85
14/05/2009 17:14	14/05/2009 09:32	255284	111	<2	0.9	94	10.1	0.7	85	31.1	0.28	11.5	182
27/05/2009 14:44	28/05/2009 08:33	262669	205	<2	0.9	96	10.0	0.6	119	30.7	1.26	13.0	345
28/05/2009 10:30	29/05/2009 08:32	263523	<10	<2	1.1	97	10.5	<0.1	8	33.6	<0.10	12.1	<10
09/06/2009 12:38	10/06/2009 08:31	268387	80	<2	2.1	98	10.1	0.7	34	31.4	1.26	13.8	156
10/06/2009 10:31	11/06/2009 08:48	269242	24	<2	2.5	101	10.3	1.8	34	31.7	1.20	13.9	85
16/06/2009 11:35	17/06/2009 08:41	271614	53	<2	4.0	106	10.7	0.8	65	31.5	1.03	15.5	176
18/06/2009 09:58	19/06/2009 08:27	272977	130	<2	0.8	99	10.0	0.3	101	30.7	2.91	14.9	242
08/07/2009 07:17	08/07/2009 09:11	280445	28	<2	1.7	102	10.2	0.5	52	31.1	0.83	15.1	150
10/07/2009 11:42	10/07/2009 08:55	281610	<10	<2	6.5	108	11.1	<0.1	11	34.0	0.48	14.3	14
14/07/2009 17:32	15/07/2009 09:41	283477	11	<2	1.7	109	10.8	0.1	16	33.5	<0.10	14.9	<10
15/07/2009 13:30	16/07/2009 10:12	283933	23	<2	1.3	109	10.7	0.2	86	33.7	<0.10	15.8	1450
19/08/2009 12:34	19/08/2009 14:59	297985	<10	<2	2.3	100	9.6	1.4	106	30.9	2.29	17.1	114
20/08/2009 17:59	21/08/2009 08:53	299075	43	<2	2.8	99	9.5	2.1	59	28.4	2.55	16.7	245
26/08/2009 17:54	27/08/2009 08:51	301831	42	<2	1.9	102	9.7	2.2	55	28.3	2.90	16.7	175
27/08/2009 11:09	28/08/2009 08:40	302524	17	<2	3.1	98	9.6	1.9	27	31.1	2.68	15.5	73
01/09/2009 17:44	02/09/2009 08:44	304106	25	<2	1.6	105	10.3	2.9	42	29.9	3.14	15.7	116
02/09/2009 12:12	02/09/2009 14:26	304545	34	<2	1.1	101	10.1	0.7	30	32.7	3.05	14.8	94
08/09/2009 15:06	09/09/2009 08:47	306738	87	<2	1.9	100	9.8	2.1	120	31.2	2.67	15.7	302
09/09/2009 09:55	10/09/2009 08:49	307210	<10	<2	3.2	99	10.3	0.6	<5	34.4	2.43	14.0	89
07/10/2009 11:58	08/10/2009 08:52	320426	11	<2	1.2	110	11.1	0.3	10	33.1	0.39	13.5	<10
08/10/2009 08:57	09/10/2009 08:58	321352	<10	<2	0.9	109	11.2	3.1	9	31.5	0.37	12.5	<10
27/10/2009 12:49	28/10/2009 08:44	328601	82	<2	0.4	102	10.6	0.1	94	27.6	1.43	13.7	546
29/10/2009 09:24	29/10/2009 11:36	329769	52	<2	0.1	103	10.6	0.3	45	32.1	<0.10	13.7	195
11/11/2009 13:21	11/11/2009 14:47	337095	54	<2	0.3	96	10.6	0.2	37	30.0	0.74	10.7	269
12/11/2009 09:12	12/11/2009 11:11	337410	271	<2	0.3	97	10.6	0.5	146	26.2	1.65	10.8	781
17/11/2009 15:42	18/11/2009 10:44	340171	43	<2	0.1	100	10.9	0.4	37	24.6	1.68	10.2	478
19/11/2009 14:10	20/11/2009 09:12	341223	121	<2	0.4	100	10.5	0.8	106	28.1	1.21	12.9	580

This site was not sampled on 27/11/09

Sampling Point	(130841) Liffey Estuary Lower, Poolbeg Lighthouse - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia µg/l as N	B.O.D. Saline mg/l	Chlorophyll a mg/m3	D.O. % Sat.	D.O. mg/l	Pheophytin a mg/m3	P (React) µg/l SRP as P	Salinity PSU	Silica mg/l	Temp. °C	TON µg/l as N
03/12/2008 13:15	03/12/2008 16:41	191843	<10	<2	0.5	118	14.0	0.4	26	33.8	0.57	7.4	154
04/12/2008 15:57	05/12/2008 10:00	192996	64	<2	0.2	99	11.2	2.7	58	32.4	0.53	8.2	225
10/12/2008 14:51	10/12/2008 16:52	195251	16	<2	0.5	111	13.8	0.1	23	32.9	0.93	6.2	182
11/12/2008 11:57	11/12/2008 14:44	195925	80	<2	0.3	122	14.8	0.6	35	33.0	0.59	7.0	1730
20/01/2009 12:46	21/01/2009 08:18	206650	<10	<2	<0.1	96	11.5	0.8	20	33.5	0.55	6.3	116
22/01/2009 12:42	23/01/2009 08:24	208341	<10	<2	<0.1	99	11.5	1.4	19	33.2	0.47	7.1	109
28/01/2009 11:21	29/01/2009 08:41	210610	77	<2	0.3	97	11.5	0.2	18	33.5	0.43	7.5	94
04/02/2009 11:27	04/02/2009 11:27	213236	707	2	1.1	97	11.9	0.7	115	21.4	3.30	5.5	1000
05/02/2009 09:07	05/02/2009 14:39	213854	207	<2	0.1	94	11.4	0.8	68	27.1	0.90	5.9	316
11/02/2009 12:50	12/02/2009 09:09	216061	120	<2	0.7	94	11.8	0.6	35	32.4	0.73	5.7	143
11/02/2009 17:07	11/02/2009 09:41	215434	49	<2	1.3	96	12.0	1.9	7	32.3	0.64	5.5	134
03/03/2009 16:48	04/03/2009 09:32	225418	397	<2	0.7	103	13.9	0.6	84	31.3	0.83	7.3	174
04/03/2009 11:21	05/03/2009 09:35	226277	19	<2	0.8	102	12.2	<0.1	28	32.9	0.60	6.2	100
10/03/2009 16:23	11/03/2009 09:15	229161	<10	<2	0.8	102	12.3	<0.1	8	33.4	0.14	7.1	22
12/03/2009 13:19	13/03/2009 08:04	230293	<10	<2	0.6	101	12.1	0.1	7	33.3	0.19	7.3	28
01/04/2009 14:27	02/04/2009 09:56	239007	<10	<2	0.3	100	11.8	0.2	11	33.0	0.25	8.2	58
02/04/2009 12:48	03/04/2009 08:46	239872	22	<2	0.5	101	11.6	0.5	22	33.1	0.27	8.6	60
21/04/2009 13:58	22/04/2009 08:28	246190	32	<2	2.0	99	10.8	0.2	32	32.3	0.44	11.6	79
22/04/2009 11:24	23/04/2009 08:22	247065	<10	<2	2.7	101	11.4	2.5	22	32.8	<0.10	10.0	47
14/05/2009 12:14	14/05/2009 14:27	255562	20	<2	2.7	96	10.4	1.2	27	32.6	0.11	11.2	40
14/05/2009 17:15	14/05/2009 09:32	255285	75	<2	2.1	91	9.9	3.2	57	32.3	0.15	11.4	75
27/05/2009 14:45	28/05/2009 08:33	262670	23	<2	1.5	94	10.2	0.5	15	33.5	<0.10	11.8	15
28/05/2009 10:31	29/05/2009 08:32	263524	<10	<2	0.9	96	10.5	0.1	9	33.7	<0.10	11.9	<10
09/06/2009 12:47	10/06/2009 08:31	268388	13	<2	2.3	98	10.1	0.8	19	32.8	0.12	13.2	24
10/06/2009 10:33	11/06/2009 08:48	269243	13	<2	0.8	96	10.0	0.5	20	33.1	<0.10	13.5	12
16/06/2009 11:37	17/06/2009 08:41	271615	19	<2	2.3	108	10.9	0.7	26	33.2	N.R.	15.1	61
18/06/2009 10:04	19/06/2009 08:27	272978	21	<2	0.9	100	10.4	0.3	8	33.5	<0.10	13.7	13
08/07/2009 07:21	08/07/2009 09:11	280446	<10	<2	1.3	106	10.8	0.3	<5	33.6	<0.10	14.4	<10
10/07/2009 11:44	10/07/2009 08:55	281611	<10	<2	1.7	106	10.9	0.4	7	33.6	<0.10	14.4	<10
14/07/2009 17:33	15/07/2009 09:41	283478	10	<2	1.1	108	10.8	1.2	15	33.6	<0.10	14.8	<10
15/07/2009 13:31	16/07/2009 10:12	283934	36	<2	1.5	109	10.9	<0.1	89	34.0	<0.10	15.1	1330
19/08/2009 12:35	19/08/2009 14:59	297986	<10	<2	1.5	99	9.8	0.8	<5	32.7	0.13	16.0	<10
20/08/2009 18:01	21/08/2009 08:53	299076	45	<2	1.9	98	9.4	1.2	59	30.0	0.40	16.5	119
26/08/2009 18:00	27/08/2009 08:51	301832	14	<2	2.1	102	9.8	0.8	33	31.3	<0.10	16.1	78
27/08/2009 11:11	28/08/2009 08:40	302525	<10	<2	2.5	100	9.8	0.9	9	32.8	<0.10	15.7	<10
01/09/2009 17:46	02/09/2009 08:44	304107	<10	<2	2.4	108	10.7	0.3	<5	34.3	0.14	15.1	24
02/09/2009 12:13	02/09/2009 14:26	304546	<10	<2	0.7	101	10.0	0.6	7	34.3	0.20	14.8	52
08/09/2009 15:09	09/09/2009 08:47	306739	11	<2	2.1	98	9.8	1.8	10	34.8	<0.10	14.8	18
09/09/2009 09:57	10/09/2009 08:49	307211	<10	<2	2.7	97	10.0	<0.1	<5	34.4	<0.10	14.1	15
07/10/2009 11:56	08/10/2009 08:52	320427	<10	<2	0.7	110	11.1	0.6	11	33.1	<0.10	13.3	<10
08/10/2009 09:01	09/10/2009 08:58	321353	<10	<2	1.5	112	11.6	2.5	8	33.0	<0.10	12.7	<10
27/10/2009 12:52	28/10/2009 08:44	328600	28	<2	<0.1	101	10.6	1.1	30	32.6	0.30	13.2	123
29/10/2009 09:25	29/10/2009 11:36	329770	11	<2	0.5	102	10.6	<0.1	11	33.2	1.50	13.3	60
11/11/2009 13:23	11/11/2009 14:47	337096	27	<2	0.7	95	10.5	<0.1	27	31.9	0.43	10.9	162
12/11/2009 09:13	12/11/2009 11:11	337411	26	<2	0.4	96	10.4	0.7	26	32.2	0.40	11.0	150
17/11/2009 15:47	18/11/2009 10:44	340172	58	<2	0.4	99	10.7	0.3	48	27.3	1.10	10.5	382
19/11/2009 14:12	20/11/2009 09:12	341224	40	<2	0.1	98	10.5	2.6	32	29.4	0.60	11.8	203

N.R. = No result
This site was not sampled on 27/01/09

Sampling Point	(130880) Tolka Estuary, Tolka at Drumcondra Bridge - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
04/12/2008 13:30	05/12/2008 10:00	192997	100	<2	1.9	99	11.6	4.5	120	0.3	1.83	6.7	1600
11/12/2008 08:42	11/12/2008 14:44	195926	160	<2	0.3	101	13.5	0.6	60	0.4	3.24	2.9	1800
22/01/2009 09:18	23/01/2009 08:51	208358	62	<2	0.7	98	11.6	0.6	58	0.4	5.71	6.5	1420
28/01/2009 15:36	29/01/2009 08:59	210627	104	<2	0.4	101	11.9	0.1	54	0.4	7.84	8.1	1800
05/02/2009 08:14	05/02/2009 14:43	213871	122	<2	0.3	99	13.0	3.5	119	0.3	5.48	2.9	1850
12/02/2009 11:50	12/02/2009 09:24	216094	89	<2	0.3	100	12.5	0.8	42	0.4	8.22	5.8	2020
03/03/2009 14:31	04/03/2009 09:32	225419	180	<2	0.7	104	11.8	0.5	55	0.4	7.32	8.4	1870
12/03/2009 10:34	13/03/2009 08:04	230294	61	<2	0.5	106	12.0	0.9	16	0.4	5.16	9.8	1960
02/04/2009 16:37	03/04/2009 08:46	239873	45	2	6.9	126	13.2	2.0	36	0.4	1.71	13.0	1560
23/04/2009 08:51	23/04/2009 08:27	247070	<10	<2	2.7	102	11.4	1.8	39	0.4	0.85	10.5	1310
14/05/2009 15:02	14/05/2009 09:32	255288	59	<2	0.9	105	11.4	1.1	119	0.4	4.03	11.4	1360
27/05/2009 13:46	28/05/2009 08:39	262675	49	<2	1.2	103	10.2	0.9	85	0.4	6.87	15.5	1890
09/06/2009 15:51	10/06/2009 08:31	268393	43	<2	0.8	108	10.8	0.8	78	0.4	8.01	14.8	2050
18/06/2009 07:27	19/06/2009 08:27	272983	67	3	<0.1	98	10.4	6.7	138	0.3	8.56	12.8	2640
10/07/2009 15:11	10/07/2009 08:55	281616	<10	<2	4.0	126	12.7	1.9	84	0.4	5.85	15.3	1330
14/07/2009 15:44	15/07/2009 09:41	283483	40	6	N.R.	101	9.9	N.R.	130	0.3	4.69	15.5	1050
19/08/2009 09:44	19/08/2009 14:59	297991	<10	<2	7.6	101	9.8	7.8	76	0.3	6.63	17.0	983
26/08/2009 15:25	27/08/2009 08:51	301837	10	<2	0.8	112	10.8	1.1	28	0.3	9.08	16.8	1030
02/09/2009 10:15	02/09/2009 14:26	304551	<10	<2	11.7	105	10.8	<0.1	34	0.3	9.22	14.0	973
08/09/2009 12:55	09/09/2009 08:48	306744	50	<2	0.7	104	10.4	0.8	57	0.4	9.30	16.0	1060
08/10/2009 14:42	09/10/2009 08:58	321354	75	2	1.2	107	11.2	1.8	99	0.3	9.73	12.3	1530
29/10/2009 07:14	29/10/2009 11:36	329781	34	5	0.8	103	10.8	1.3	85	0.4	8.56	13.1	1070
12/11/2009 08:05	12/11/2009 11:11	337416	84	2	0.7	95	10.8	3.5	114	0.3	6.25	10.0	1050
19/11/2009 12:07	20/11/2009 09:12	341229	38	<2	0.2	101	10.6	2.7	105	0.2	5.81	12.8	1030

N.R.= No result

Sampling Point	(130890) Tolka Estuary at Annesley Bridge Road - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
04/12/2008 13:32	05/12/2008 10:00	192998	0	3	1.6	98	11.4	3.6	70	0.1	1.83	6.7	1460
11/12/2008 09:11	11/12/2008 14:44	195927	120	<2	0.7	96	12.6	1.2	50	0.4	0.62	3.6	1880
22/01/2009 09:16	23/01/2009 08:51	208359	59	<2	0.2	98	11.6	1.5	58	0.4	5.84	6.4	1460
28/01/2009 15:37	29/01/2009 08:59	210628	104	<2	0.5	101	12.0	0.7	60	1.4	7.46	7.4	1840
05/02/2009 08:13	05/02/2009 14:43	213872	122	<2	0.8	98	12.8	2.8	121	0.2	5.67	2.9	1850
12/02/2009 11:51	12/02/2009 09:24	216095	83	<2	0.4	101	12.6	0.5	42	0.4	7.90	5.6	2050
03/03/2009 14:36	04/03/2009 09:32	225420	78	<2	0.8	118	13.3	1.0	47	0.4	7.15	8.6	1860
12/03/2009 10:51	13/03/2009 08:04	230295	27	<2	0.7	110	12.6	0.8	13	0.4	5.22	9.4	1950
02/04/2009 16:41	03/04/2009 08:46	239874	<10	<2	5.1	169	17.5	1.2	16	0.3	1.06	13.7	1470
23/04/2009 09:12	23/04/2009 08:27	247071	<10	3	0.9	106	11.7	1.6	21	0.4	<0.10	11.2	1260
14/05/2009 15:14	14/05/2009 09:32	255289	<10	<2	0.9	145	15.7	1.6	99	0.4	3.69	11.6	1310
27/05/2009 13:47	28/05/2009 08:39	262676	18	<2	0.8	114	11.2	0.6	79	0.5	6.79	15.9	1840
09/06/2009 15:39	10/06/2009 08:31	268394	<10	<2	0.8	124	12.2	1.0	67	0.4	7.70	15.7	2040
18/06/2009 07:39	19/06/2009 08:27	272984	62	5	2.3	94	10.0	3.2	136	0.3	7.82	12.8	2540
10/07/2009 14:59	10/07/2009 08:55	281617	<10	<2	9.6	170	17.0	<0.1	72	1.2	4.91	15.6	1170
14/07/2009 16:00	15/07/2009 09:41	283484	63	6	10.8	96	9.5	9.6	134	0.2	2.57	15.6	1080
19/08/2009 09:56	19/08/2009 14:59	297992	44	<2	6.1	78	7.6	4.6	92	0.9	6.84	17.0	790
26/08/2009 15:42	27/08/2009 08:51	301838	<10	<2	1.6	118	11.2	1.0	24	0.4	8.10	17.6	1060
02/09/2009 10:26	02/09/2009 14:26	304552	<10	<2	1.1	108	11.1	1.9	34	0.3	10.60	14.0	1020
08/09/2009 13:08	09/09/2009 08:48	306745	42	<2	1.1	104	10.3	1.4	63	0.4	8.82	16.1	1070
08/10/2009 15:00	09/10/2009 08:58	321355	25	<2	0.7	122	13.2	0.5	89	0.5	9.03	12.0	1540
29/10/2009 07:33	29/10/2009 11:36	329782	23	<2	0.8	101	10.5	1.7	84	0.4	8.16	13.5	1070
12/11/2009 08:06	12/11/2009 11:11	337417	77	3	1.0	95	11.0	1.8	109	0.3	6.26	9.4	1150
19/11/2009 12:08	20/11/2009 09:12	341230	20	2	1.3	99	10.5	1.6	103	0.2	5.58	12.6	1030

Sampling Point	(130900) Tolka Estuary at East Point Business Park Bridge - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
04/12/2008 13:34	05/12/2008 10:00	192999	166	2	0.2	98	11.4	3.8	67	5.1	1.85	6.9	1050
11/12/2008 09:35	11/12/2008 14:44	195928	120	<2	0.1	90	11.8	0.5	50	3.2	2.12	3.7	1820
22/01/2009 09:14	23/01/2009 08:51	208360	80	<2	0.2	95	11.2	0.9	64	4.6	6.43	6.9	1410
28/01/2009 15:37	29/01/2009 08:59	210629	121	<2	0.3	103	12.2	0.2	121	6.0	8.23	7.7	1720
05/02/2009 08:11	05/02/2009 14:43	213873	129	<2	0.8	98	12.7	1.6	128	0.2	5.78	3.3	1830
12/02/2009 11:47	12/02/2009 09:24	216096	121	<2	0.3	98	12.0	0.7	49	5.0	7.24	6.4	1950
03/03/2009 14:33	04/03/2009 09:32	225421	138	<2	0.4	114	12.9	1.1	48	18.1	4.18	8.3	886
12/03/2009 11:01	13/03/2009 08:04	230296	82	<2	0.3	102	11.7	0.7	36	14.2	4.23	9.1	571
02/04/2009 16:39	03/04/2009 08:46	239875	171	<2	1.3	129	13.2	3.7	48	3.7	1.37	14.1	1310
23/04/2009 09:29	23/04/2009 08:27	247072	154	<2	0.8	80	8.6	3.0	74	15.2	4.77	12.2	750
14/05/2009 15:23	14/05/2009 09:32	255290	170	<2	0.8	90	9.8	1.1	108	8.7	3.27	11.5	922
27/05/2009 13:48	28/05/2009 08:39	262677	104	<2	0.7	101	10.0	2.3	76	19.3	3.81	15.6	748
09/06/2009 15:28	10/06/2009 08:31	268395	45	<2	0.7	120	11.7	0.5	76	2.9	7.10	16.4	1930
18/06/2009 07:48	19/06/2009 08:27	272985	101	<2	3.1	88	9.2	3.4	125	5.9	8.84	13.1	1950
10/07/2009 14:50	10/07/2009 08:55	281618	22	<2	2.7	149	14.7	1.2	81	10.3	4.37	16.1	978
14/07/2009 16:09	15/07/2009 09:41	283485	202	4	2.4	94	9.2	1.4	145	3.0	1.44	15.8	994
19/08/2009 10:06	19/08/2009 14:59	297993	205	<2	0.5	81	7.8	4.0	118	19.5	4.40	17.5	403
26/08/2009 15:51	27/08/2009 08:51	301839	39	<2	0.7	115	10.8	1.6	44	12.2	6.28	17.9	373
02/09/2009 10:41	02/09/2009 14:26	304553	21	<2	<0.1	94	9.6	8.8	58	4.3	7.18	14.1	473
08/09/2009 13:18	09/09/2009 08:48	306746	78	<2	2.3	94	9.3	1.7	62	13.4	4.80	16.4	256
08/10/2009 15:15	09/10/2009 08:58	321356	66	<2	0.5	125	13.5	3.0	91	1.7	9.21	12.0	1450
29/10/2009 07:47	29/10/2009 11:36	329783	100	<2	0.8	98	10.2	2.7	104	1.7	0.92	13.4	1080
12/11/2009 08:07	12/11/2009 11:11	337418	76	<2	1.1	94	10.8	1.9	88	1.6	5.78	9.6	1110
19/11/2009 12:09	20/11/2009 09:12	341231	48	<2	0.6	99	10.5	3.8	112	0.3	5.60	12.6	1030

Sampling Point	(130910) Tolka Estuary, Castle Ave. - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
04/12/2008 15:32	05/12/2008 10:00	193000	53	<2	1.1	98	11.5	1.0	45	27.5	0.71	6.5	312
11/12/2008 11:20	11/12/2008 14:44	195929	104	<2	0.1	93	11.9	0.8	52	23.7	1.70	4.7	580
22/01/2009 11:18	23/01/2009 08:52	208361	133	<2	<0.1	96	11.4	0.7	57	25.3	2.31	6.2	636
28/01/2009 13:58	29/01/2009 08:59	210630	227	<2	0.9	91	11.0	<0.1	68	23.2	3.70	6.6	1070
05/02/2009 08:34	05/02/2009 14:43	213874	189	<2	0.5	96	12.6	1.3	123	5.4	5.77	3.1	1710
12/02/2009 12:20	12/02/2009 09:24	216097	201	<2	0.3	95	12.1	0.7	49	24.3	3.27	5.2	758
03/03/2009 16:16	04/03/2009 09:32	225422	197	<2	<0.1	108	12.6	1.5	53	27.0	1.98	6.9	357
12/03/2009 13:48	13/03/2009 08:04	230297	60	<2	0.4	102	11.9	0.3	20	29.2	0.35	8.5	76
02/04/2009 16:15	02/04/2009 10:00	239008	479	<2	0.5	105	11.8	0.1	228	29.6	0.94	10.3	398
23/04/2009 10:48	23/04/2009 08:27	247073	432	2	2.9	86	9.2	4.4	240	29.0	0.11	12.7	557
14/05/2009 16:38	14/05/2009 09:32	255291	202	<2	1.5	94	10.0	0.8	177	27.9	0.72	12.1	546
27/05/2009 14:10	28/05/2009 08:39	262678	61	<2	0.8	94	9.8	0.6	32	31.6	1.24	13.3	98
09/06/2009 13:26	10/06/2009 08:31	268396	231	<2	0.9	86	8.8	1.1	120	23.7	4.41	14.4	876
18/06/2009 09:32	19/06/2009 08:27	272987	128	<2	1.5	93	9.5	1.1	72	26.4	2.89	14.2	373
10/07/2009 13:44	10/07/2009 08:55	281619	48	<2	1.2	105	10.6	0.8	64	29.8	1.31	15.4	214
14/07/2009 17:08	15/07/2009 09:41	283486	86	<2	3.1	110	10.6	1.7	102	28.4	1.12	16.5	313
19/08/2009 12:07	19/08/2009 14:59	297994	66	<2	2.7	88	8.3	1.9	135	27.8	2.68	17.8	184
26/08/2009 17:29	27/08/2009 08:51	301840	47	<2	4.1	102	9.8	1.7	54	27.2	2.81	16.9	168
02/09/2009 11:52	02/09/2009 14:26	304554	51	<2	2.5	94	9.3	1.6	29	28.8	3.83	14.9	138
08/09/2009 14:46	09/09/2009 08:48	306747	59	<2	3.7	97	9.5	1.5	44	27.0	3.00	15.8	131
07/10/2009 14:29	08/10/2009 08:52	320428	144	<2	0.4	98	10.1	0.4	76	26.8	1.95	12.6	388
29/10/2009 08:49	29/10/2009 11:36	329775	231	<2	0.8	92	9.6	1.5	120	21.0	0.33	13.5	727
12/11/2009 08:40	12/11/2009 11:11	337419	183	<2	0.8	88	10.0	1.8	105	7.0	4.63	9.1	902
19/11/2009 13:38	20/11/2009 09:12	341232	126	<2	0.6	96	10.3	2.1	77	20.3	2.76	11.6	639

Sampling Point	(130911) Tolka Estuary, Castle Ave. - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
04/12/2008 15:34	05/12/2008 10:00	193001	75	<2	0.2	99	11.6	2.2	55	30.4	0.64	6.7	406
11/12/2008 11:21	11/12/2008 14:44	195930	63	<2	0.3	99	12.4	0.7	42	31.5	0.98	5.6	262
22/01/2009 11:20	23/01/2009 08:52	208362	100	<2	<0.1	96	11.3	0.6	42	30.7	1.10	7.0	313
28/01/2009 13:59	29/01/2009 08:59	210631	160	<2	0.8	96	11.5	0.4	42	31.7	0.29	7.3	160
05/02/2009 08:36	05/02/2009 14:43	213875	241	<2	1.1	97	11.8	<0.1	78	28.0	3.08	5.5	407
12/02/2009 12:22	12/02/2009 09:24	216098	113	<2	0.7	95	12.0	0.5	35	30.9	1.90	5.3	214
03/03/2009 16:19	04/03/2009 09:32	225423	123	<2	0.7	104	12.1	0.7	41	30.9	0.94	7.1	165
12/03/2009 13:49	13/03/2009 08:04	230298	29	<2	0.4	103	12.2	0.5	15	32.5	0.30	7.9	52
02/04/2009 16:16	02/04/2009 10:00	239009	349	<2	1.1	105	11.8	0.2	162	30.0	0.60	10.3	272
23/04/2009 10:50	23/04/2009 08:27	247074	312	<2	2.7	95	10.2	2.0	174	29.7	0.22	12.0	367
14/05/2009 16:39	14/05/2009 09:32	255292	192	<2	2.7	94	10.0	1.2	171	27.9	0.72	12.1	573
27/05/2009 14:12	28/05/2009 08:39	262679	59	<2	1.1	95	10.0	<0.1	<5	31.9	0.34	12.7	100
09/06/2009 13:31	10/06/2009 08:31	268397	205	<2	0.5	88	8.9	0.9	133	25.2	1.46	14.4	482
18/06/2009 09:34	19/06/2009 08:27	272988	80	<2	6.7	96	9.8	<0.1	40	31.6	0.17	14.4	103
10/07/2009 13:45	10/07/2009 08:55	281620	16	<2	2.7	106	10.7	0.9	40	32.4	0.14	15.2	95
14/07/2009 17:10	15/07/2009 09:41	283487	56	<2	1.6	109	10.5	3.4	122	28.9	0.52	16.8	237
19/08/2009 12:08	19/08/2009 14:59	297995	20	<2	5.9	94	9.0	5.2	68	30.9	0.40	17.1	65
26/08/2009 17:33	27/08/2009 08:51	301841	15	<2	2.7	97	9.4	1.1	23	31.7	0.21	16.0	45
02/09/2009 11:53	02/09/2009 14:26	304555	44	<2	0.7	96	9.5	0.3	31	30.7	0.49	15.1	108
08/09/2009 14:47	09/09/2009 08:48	306748	23	<2	3.2	95	9.4	1.7	21	32.4	0.13	15.2	54
07/10/2009 14:33	08/10/2009 08:52	320429	46	<2	0.5	109	11.2	0.9	36	23.2	0.12	13.2	99
29/10/2009 08:50	29/10/2009 11:36	329776	359	<2	0.3	92	9.5	1.5	203	22.2	2.67	13.8	1020
12/11/2009 08:43	12/11/2009 11:11	337420	85	<2	0.3	96	10.6	0.7	52	27.4	0.81	10.3	388
19/11/2009 13:39	20/11/2009 09:12	341233	53	<2	0.5	97	10.4	1.1	33	29.4	0.82	11.4	234

Sampling Point	(130920) Tolka Estuary, Clontarf Boat Club - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
04/12/2008 15:23	05/12/2008 10:00	193002	62	<2	0.1	98	11.4	1.5	50	18.3	0.87	6.8	371
11/12/2008 11:10	11/12/2008 14:44	195931	237	<2	<0.1	95	11.9	0.7	80	27.9	3.97	5.5	1392
22/01/2009 11:04	23/01/2009 08:52	208363	130	<2	0.1	98	11.6	0.5	53	27.3	1.83	6.3	539
28/01/2009 13:50	29/01/2009 08:59	210632	232	<2	0.4	98	11.7	0.1	56	28.7	1.73	7.4	335
05/02/2009 08:44	05/02/2009 14:43	213876	245	<2	0.7	97	12.5	1.7	117	9.1	5.25	3.6	1580
12/02/2009 12:30	12/02/2009 09:24	216099	171	<2	0.7	96	12.1	0.3	41	28.6	2.24	5.4	291
03/03/2009 16:26	04/03/2009 09:32	225424	91	<2	0.8	104	12.1	0.4	34	32.0	0.78	6.8	146
12/03/2009 13:35	13/03/2009 08:04	230299	122	<2	0.5	103	12.0	0.2	31	30.9	0.42	8.3	94
02/04/2009 16:07	02/04/2009 10:00	239010	230	<2	0.5	102	11.6	<0.1	106	30.9	0.52	9.7	216
23/04/2009 10:56	23/04/2009 08:27	247075	172	<2	2.5	99	10.8	1.5	102	30.8	2.68	11.5	262
14/05/2009 16:50	14/05/2009 09:32	255293	153	<2	3.3	96	10.3	1.3	127	30.0	0.43	11.9	318
27/05/2009 14:21	28/05/2009 08:39	262680	32	<2	0.7	96	10.3	0.4	21	32.5	0.88	12.2	50
09/06/2009 13:38	10/06/2009 08:31	268398	110	<2	1.3	93	9.6	0.8	123	27.6	2.04	13.9	256
18/06/2009 09:22	19/06/2009 08:27	272986	88	<2	1.2	97	9.9	0.6	52	28.5	2.32	14.3	261
10/07/2009 13:36	10/07/2009 08:56	281621	<10	<2	2.9	107	10.9	0.8	27	32.9	0.63	14.8	54
14/07/2009 16:59	15/07/2009 09:41	283488	64	<2	<0.1	107	10.2	3.3	135	29.6	0.34	16.8	280
19/08/2009 11:59	19/08/2009 14:59	297996	<10	<2	1.9	99	9.5	0.7	29	31.6	2.08	17.0	75
26/08/2009 17:20	27/08/2009 08:51	301842	13	<2	1.1	103	9.8	0.9	25	28.8	2.70	16.9	78
02/09/2009 11:45	02/09/2009 14:26	304556	30	<2	2.8	100	10.0	1.2	28	31.4	3.51	14.9	88
08/09/2009 14:36	09/09/2009 08:48	306749	63	<2	3.3	98	9.7	1.1	64	30.5	2.66	15.7	234
07/10/2009 14:40	08/10/2009 08:52	320430	112	<2	0.4	99	10.3	0.4	68	27.7	1.57	12.7	318
29/10/2009 08:58	29/10/2009 11:36	329777	293	<2	1.2	98	10.1	<0.1	192	24.6	0.21	14.0	980
12/11/2009 08:49	12/11/2009 11:11	337421	295	<2	0.3	97	10.8	1.0	120	20.3	2.94	10.1	845
19/11/2009 13:45	20/11/2009 09:12	341234	131	<2	0.3	99	10.6	1.2	77	19.5	2.41	11.7	647

Sampling Point	(130921) Tolka Estuary, Clontarf Boat Club - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
04/12/2008 15:24	05/12/2008 10:28	193003	30	<2	<0.1	101	11.7	2.0	38	32.5	0.55	7.1	231
11/12/2008 11:12	11/12/2008 14:44	195932	28	<2	0.4	100	12.4	0.2	30	33.0	0.45	6.0	169
22/01/2009 11:08	23/01/2009 08:52	208364	51	<2	0.1	98	11.5	0.3	32	28.9	0.88	6.8	224
28/01/2009 13:51	29/01/2009 08:59	210633	140	<2	1.2	98	11.7	<0.1	32	32.9	0.60	7.3	128
05/02/2009 08:46	05/02/2009 14:43	213877	186	<2	<0.1	97	11.8	1.0	57	31.1	0.66	5.8	206
12/02/2009 12:32	12/02/2009 09:24	216100	94	<2	0.4	95	12.0	0.4	32	32.1	0.86	5.5	171
03/03/2009 16:30	04/03/2009 09:32	225425	53	<2	0.7	103	12.1	0.6	28	32.4	0.64	6.9	106
12/03/2009 13:36	13/03/2009 08:04	230300	19	<2	0.8	104	12.4	<0.1	13	33.0	0.20	7.6	35
02/04/2009 16:09	02/04/2009 10:00	239011	42	<2	0.5	103	12.0	<0.1	31	32.5	0.31	8.8	90
23/04/2009 10:57	23/04/2009 08:27	247076	109	<2	1.3	101	11.1	3.7	76	31.4	0.29	11.1	149
14/05/2009 16:51	14/05/2009 09:32	255294	121	<2	1.5	96	10.3	0.7	104	30.6	0.32	11.8	226
27/05/2009 14:22	28/05/2009 08:39	262681	31	<2	1.1	97	10.3	0.1	20	32.6	0.20	12.2	49
09/06/2009 13:41	10/06/2009 08:31	268399	66	<2	1.7	92	9.6	0.9	45	30.6	0.45	13.4	101
18/06/2009 09:23	19/06/2009 08:27	272989	36	<2	1.9	101	10.4	0.6	20	32.5	<0.10	14.1	58
10/07/2009 13:37	10/07/2009 08:56	281622	<10	<2	1.5	108	11.0	1.1	17	33.3	<0.10	14.7	25
14/07/2009 17:01	15/07/2009 09:41	283489	40	<2	4.9	106	10.3	1.0	81	30.6	0.31	16.2	173
19/08/2009 12:00	19/08/2009 14:59	297997	<10	<2	1.1	101	9.8	4.6	5	32.4	0.15	16.3	27
26/08/2009 17:22	27/08/2009 08:51	301843	<10	<2	1.2	100	9.7	0.7	15	32.4	0.16	15.9	24
02/09/2009 11:47	02/09/2009 14:26	304557	<10	<2	2.7	101	10.1	0.5	11	33.8	0.22	14.7	27
08/09/2009 14:38	09/09/2009 08:48	306750	14	<2	1.7	96	9.6	0.6	9	34.1	<0.10	15.0	27
07/10/2009 14:43	08/10/2009 08:52	320431	22	<2	0.4	110	11.3	0.5	21	32.8	<0.10	13.3	29
29/10/2009 08:59	29/10/2009 11:36	329778	135	<2	0.7	98	10.2	0.6	92	29.1	10.00	13.8	469
12/11/2009 08:51	12/11/2009 11:11	337422	54	<2	<0.1	98	10.7	0.9	36	30.0	0.63	10.6	228
19/11/2009 13:46	20/11/2009 09:12	341235	48	<2	0.5	97	10.4	1.5	30	31.4	0.66	11.6	191

Sampling Point	(130930) Tolka Estuary, S. Lagoon at Bull Wall Wooden Bridge - Surface Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
04/12/2008 15:41	05/12/2008 10:28	193004	68	<2	<0.1	98	11.5	3.5	57	28.8	0.52	7.0	389
11/12/2008 11:31	11/12/2008 14:44	195933	165	<2	<0.1	95	12.0	0.8	75	25.3	0.87	5.4	653
22/01/2009 10:51	23/01/2009 08:52	208365	141	<2	<0.1	96	11.4	0.7	56	26.1	2.06	6.2	646
28/01/2009 13:42	29/01/2009 08:59	210634	364	<2	0.7	98	11.7	<0.1	85	27.7	1.88	7.4	411
05/02/2009 08:53	05/02/2009 14:43	213878	517	<2	0.2	93	11.8	1.1	141	14.2	3.63	4.2	1540
12/02/2009 12:37	12/02/2009 09:24	216101	142	<2	0.4	96	12.2	0.3	36	30.8	1.89	5.5	184
03/03/2009 16:34	04/03/2009 09:32	225426	322	<2	0.4	104	12.1	0.7	70	30.7	0.96	7.1	207
12/03/2009 13:57	13/03/2009 08:05	230301	148	<2	<0.1	106	12.3	0.8	34	31.0	0.44	8.7	65
23/04/2009 11:03	23/04/2009 08:27	247077	181	<2	1.6	100	11.0	4.2	112	30.8	0.82	11.4	223
14/05/2009 16:58	14/05/2009 09:32	255295	109	<2	1.7	98	10.5	0.5	93	31.3	0.26	11.8	189
27/05/2009 14:30	28/05/2009 08:39	262682	82	<2	0.8	97	10.2	0.5	46	31.8	1.12	12.7	126
09/06/2009 13:00	10/06/2009 08:31	268400	155	<2	0.8	94	9.5	1.0	103	26.9	2.13	14.2	347
18/06/2009 09:42	19/06/2009 08:27	272990	136	<2	1.2	96	9.8	0.7	79	25.5	2.85	14.2	445
10/07/2009 13:53	10/07/2009 08:56	281623	10	<2	1.6	112	11.2	0.5	51	32.3	0.76	15.4	112
14/07/2009 17:18	15/07/2009 09:41	283490	27	<2	1.1	113	10.9	6.4	68	30.7	<0.10	16.5	142
19/08/2009 12:17	19/08/2009 14:59	297998	<10	<2	2.5	100	9.6	1.1	38	31.8	2.05	17.1	76
26/08/2009 17:40	27/08/2009 08:51	301844	23	<2	3.3	104	9.9	1.1	50	28.8	2.70	16.9	122
02/09/2009 11:59	02/09/2009 14:26	304558	41	<2	0.7	101	10.0	4.1	39	29.7	3.37	14.8	124
08/09/2009 14:54	09/09/2009 08:48	306751	52	<2	3.5	99	9.8	1.4	66	30.4	2.80	15.6	147
07/10/2009 14:47	08/10/2009 08:52	320432	60	<2	0.4	112	11.4	0.5	46	31.1	0.71	13.1	141
29/10/2009 09:06	29/10/2009 11:36	329779	180	<2	0.4	98	10.2	1.5	120	23.4	0.22	13.6	740
12/11/2009 08:56	12/11/2009 11:11	337423	214	<2	0.1	95	10.6	1.1	96	17.8	3.05	9.8	867
19/11/2009 13:52	20/11/2009 09:12	341236	151	<2	0.6	98	10.5	1.0	72	20.3	2.51	11.7	647
This site was not sampled on 2/04/09													

Sampling Point	(130931) Tolka Estuary, S. Lagoon at Bull Wall Wooden Bridge - Depth Sample												
Sampled Date	Received Date	Sample Number	Ammonia	B.O.D. Saline	Chlorophyll a	D.O.	D.O.	Pheophytin a	P (React)	Salinity	Silica	Temp.	TON
			µg/l as N	mg/l	mg/m3	% Sat.	mg/l	mg/m3	µg/l SRP as P	PSU	mg/l	°C	µg/l as N
04/12/2008 15:44	05/12/2008 10:28	193005	67	<2	0.4	99	11.6	1.7	54	29.1	0.47	6.8	364
11/12/2008 11:33	11/12/2008 14:45	195934	118	<2	0.1	97	12.1	0.8	64	28.5	0.67	5.7	476
22/01/2009 10:56	23/01/2009 08:52	208366	126	<2	0.3	96	11.4	0.3	52	26.7	2.05	6.3	586
28/01/2009 13:44	29/01/2009 08:59	210635	250	<2	0.3	98	11.7	0.6	53	30.2	1.09	7.3	243
05/02/2009 08:54	05/02/2009 14:43	213879	208	<2	0.4	95	11.6	1.2	50	23.8	3.67	5.5	444
12/02/2009 12:39	12/02/2009 09:24	216102	142	<2	0.4	96	12.2	0.3	37	30.7	1.62	5.5	184
03/03/2009 16:36	04/03/2009 09:32	225427	248	<2	<0.1	103	12.0	2.0	58	31.5	0.86	7.2	171
12/03/2009 13:58	13/03/2009 08:05	230302	151	<2	0.4	105	12.3	0.6	36	31.0	0.38	8.7	86
23/04/2009 11:05	23/04/2009 08:27	247078	178	<2	1.1	100	11.0	1.5	107	30.8	0.84	11.4	220
14/05/2009 16:59	14/05/2009 09:32	255296	93	<2	1.5	98	10.5	1.2	93	31.3	0.25	11.9	191
27/05/2009 14:31	28/05/2009 08:39	262683	66	<2	1.1	96	10.2	0.5	37	32.3	0.28	12.5	94
09/06/2009 13:14	10/06/2009 08:31	268401	122	<2	2.0	93	9.5	0.9	80	27.9	0.84	13.9	236
18/06/2009 09:43	19/06/2009 08:27	272991	137	<2	2.0	96	9.8	1.5	79	25.4	1.07	14.3	438
10/07/2009 13:54	10/07/2009 08:56	281624	<10	<2	2.1	111	11.1	0.6	43	32.6	0.12	15.3	91
14/07/2009 17:19	15/07/2009 09:41	283491	38	<2	1.5	113	10.9	2.6	69	30.8	<0.10	16.5	138
19/08/2009 12:18	19/08/2009 14:59	297999	<10	<2	1.3	100	9.6	2.1	32	31.8	0.16	16.9	62
26/08/2009 17:42	27/08/2009 08:51	301845	12	<2	1.9	104	9.8	2.5	26	29.1	0.35	17.1	77
02/09/2009 12:01	02/09/2009 14:26	304559	14	<2	2.9	102	10.2	1.1	17	30.6	0.33	14.9	46
08/09/2009 14:56	09/09/2009 08:48	306752	16	<2	1.7	100	9.8	1.3	19	31.6	0.16	15.5	56
07/10/2009 14:49	08/10/2009 08:52	320433	61	<2	0.5	111	11.3	1.1	47	31.3	0.20	13.2	121
29/10/2009 09:08	29/10/2009 11:36	329780	160	<2	0.7	98	10.2	1.1	109	24.8	10.40	13.6	652
12/11/2009 08:59	12/11/2009 11:11	337424	168	<2	<0.1	93	10.4	0.8	77	18.7	2.61	9.9	707
19/11/2009 13:55	20/11/2009 09:12	341237	148	<2	0.5	98	10.4	2.3	76	20.4	2.29	11.5	643
This site was not sampled on 2/04/09													