Administration,
Environmental Licensing Programme,
Office of Climate, Licensing & Resource Use,
Environmental Protection Agency,
headquaters,POBox3000,
Johnstown,Castle Estate,
County Wexford.
Your Ref.:A0438-01

Our reference:MS/DUN/11

28 February 2011

Sub.: Dungourney Agglomeration (Register No. A0438-01) Regulation 25(c)(ii) Further Information Response

Dear Sir/Madam,

With reference to your letter of the 14 of December 2010, please find the following attached:

- 1 Original of the Dungourney Agglomeration (Register No. A0438-01) Regulation 25(c)(ii) Further Information Response.
- 1 Copy of the Dungourney Agglomeration (Register No. A0438-01) Regulation 25(c)(ii) Further Information Response.
- 1 Original of attachments.
- 1 Copy of attachments .
- 1 CDROM with the Further Information Response & Attachments in PDF Format.

Yours faithfully,

_____
Ms. Patricia Power,
Director of services, Water Services,
Cork County Council,
County Hall, Cork.

Dungourney Regulation 25 Further Information Response

Question 1 Assess the likelihood of significant effect of the waste water discharges from the above agglomerations on the relevant European sites by referring to Circular L8/08 "Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments" issued by the Department of Heritage and Local Government. In particular, the flow diagram in Appendix 1 should be completed and the results of each section recorded. Provide details of the results of this assessment within one month of the date of this notice and provide a reasoned response for the decision. If significant effects are likely then and appropriate assessment must be carried out and a report of this assessment forwarded to the Agency by within 1 month of the date of this notice.
You are advised to provide the requested information in accordance with the "Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. 684 of 2007)"

Wastewater Discharge Licence Application: A0438-01

Circular L8/08 2 September 2008
Water Services Investment and Rural Water Programmes –
Protection of Natural Heritage and National Monuments

1 Introduction

1.1 Dungourney is a small village located seven miles north east of Middleton Town off the R627 road . Dungourney existing sewerage treatment system is serving population equivalent of 75 .
The receiving water body of the Dungourney septic tank is the Dungourney River Hydrometric Area 19 (Lee – Cork Harbour – Youghal Bay). All effluent from septic tank discharges directly into the Dungourney river, there are no distances to groundwater or any other media. The Dungourney is the main tributary of the Owenacurra River and has 5 EPA biological monitoring sites. The main pressures on the river are agricultural and forestry in the upper reaches and IPC Irish Distillers in the lower stretches. The Dungourney joins the Owenacurra River at the Owenacurra Estuary at which point waters become tidal.

1.2 This document brings together all of the information necessary to make determination as to whether there are likely to be significant impacts arising from the Dungourney discharges on the designated sites within the catchment area.

These are :-

The Cork harbour SPA/SAC is approximately 9 km from the discharge location.

Based on the preliminary flow chart already carried out, the need for an assessment is solely to assess whether the Dungourney discharge has an impact on the Cork harbour SPA/SAC.

2 Appropriate Assessment Screening Matrix

2.1 Description of project	
Location	Dungourney
Description of the key components of the project	Dungourney Septic tank serves a population equivalent of approx 75. The Loading increases due to storm water . The septic tank discharges into the Dungourney River Hydrometric Area 19 (Lee – Cork Harbour – Youghal Bay).
Distance from designated sites in potential impact zone	The site is approximately 9 km away from The Cork harbour SPA/SAC

2.2 Description of the Natura 2000 sites within the potential impact zone[1]	
Name	Cork Harbour Special Protection Area
Site Code	4130
Site Description	The Cork Harbour SPA is an estuarine complex which is primarily comprised of intertidal habitats, mainly mudflats as well as some other coastal and marine habitats. These habitats support very high numbers of wintering waterfowl, that feed on the macroinvertebrates inhabiting the mudflats. The Harbour regularly supports in excess of 20,000 wintering birds, making it an internationally important site and the fifth most important wintering waterfowl site in the country. Discharges from the Cloyne Wastewater Treatment Plant enter Saleen Creek (Poulnabibe Inlet) in the east of Cork Harbour. This relatively small enclosed estuary supports mud shores, mixed sediment shores and areas of salt marsh habitat. The main habitats of importance within the creek are mud shores and mixed sediment shores which are used by waders, while the upper shore and salt marsh habitats provide important high tide water roosts. The open water within the creek and adjacent to it is important for grebes

[1] Natura 2000 sites within the potential impact zone of the proposed development have been identified in accordance with guidance provided in the NPWS circular L8/08.

	and sea ducks. More information on the Cork Harbour SPA Bird count data is provided as an attachment.

2.3 Assessment Criteria	
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Salmonoid River.	**Discharge from Dungourney Septic tank :** Effluent from the septic tank is discharged into the Dungorney river, Other Discharges in the vicinity: **Discharge from Saleen Septic Tank:** Wastewater collected in the village of Saleen discharges via a septic tank into Saleen Creek approx. 0.5km upstream of the SPA/SAC **Discharge from Cloyne WWTP:** Treated effluent from the Cloyne Waste Water Treatment Plant is discharged to Spital Stream. This stream enters Saleen Creek approx 2.7km upstream of the Cork Harbour SPA.

	Untreated waste from Aghada and Whitegate discharge directly into the Harbour along the southern boundary of the SPA. Treated waste from a combination of two sources (Midleton WWTP and Irish Distillers Ltd) discharges into the East Channel of the Harbour at Rathcoursey.
Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Salmonoid river taking into account the following: o Size and scale o Land-take o Distance from the Natura 2000 site or key features of the site: o Resource requirements (water abstraction etc.) o Emissions (disposal to land, water or air) o Excavation Requirements o Transportation Requirements o Duration of construction, operation, decommissioning o Other.	Discharges could give rise to elevated nutrients entering Saleen Creek and the eastern portion of Cork Harbour. Increased nutrient levels may impact on the ecology of an area by changing the composition of floral communities and reducing the ability of less robust plants to survive. Increased nutrient levels may also result in increasing the invertebrate populations in the estuary, thereby increasing bird population levels. However the potential for the treatment plant discharge to result in elevated nutrients within the harbour is reduced by two main factors: 1. The treated effluent enters the Cork Harbour SPA which is a large and well exchanged body of water with unlimited dilution capacity.
Describe any likely changes to the site arising as a result of: o Reduction in habitat area o Disturbance to key	Reduction in habitat area: N/A Disturbance to key species: Increased nutrients in the Dungourney River could have a

species ○ Habitat or species fragmentation ○ Reduction in species density ○ Changes in key indicators of conservation value (water quality etc) ○ Climate Change	negative effect on fish numbers in the SAC. However there is no evidence to support this. Habitat or species fragmentation: No evidence of fragmentation in the water dependent species in the surrounding SAC's & SPA's. Reduction in species density: N/A. Changes in key indicators of conservation value eg water quality: The EPA water monitoring sites in the vicinity give a consistently high Q rating of 4-4 upstream of the discharge location. (last available data 2008). As part of the Application process Cork County Council carried out limited sampling of water immediately downstream of the discharge point (depending on safe access) There is no evidence of deterioration of water quality associated with these results. Refer to Dungorney discharge licence application and the EPA and Maritime Institute data for Cork Harbour.
Describe from the above those elements of the project of plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.	

3. Finding of No Significant Effects Report Matrix

3.1 Project Description	
Name of project or plan	Dungorney Septic tank

Name and location of Natura 2000 site	Cork Harbour Special protection Area
Description of the project or plan	Dungourney Septic tank serves a population equivalent of approx 75. The Loading increases due to storm water . The septic tank discharges into the Dungourney River Hydrometric Area 19 (Lee – Cork Harbour – Youghal Bay).
Is the project or plan directly connected with or necessary to the management of the site (provide details)?	No

3.2 The assessment of significance of effects	
Describe how the project or plan (alone or in combination) is likely to affect the river	The discharges from Dungourney septic tank discharge directly into the River . If, in times of low flow in the river the treatment process was to breakdown or deteriorate in Dungourney and/or other treatment processes upstream, this could result in high levels of nutrients discharging into the Salmonoid river which could affect the fish life in the SAC's&SPA's.
Explain why these effects are not considered significant.	The effluent from Saleen septic tank is discharging to a large well-exchanged body of water where dilution and dispersion potential is high. No significant impacts are evident or predicted on species for which the SPA is designated. Available water quality data from EPA for Cork Harbour (2009) and Marine Institute (2010) both show a body of

	water that is in compliance both with water quality and shellfish designation standards.
List of agencies consulted: provide contact name and telephone or email address	Birdwatch Ireland – Data request.
Response to consultation	Birdwatch Ireland sent on Bird count data.

Data collected to carry out the assessment			
Who carried out the assessment	Sources of data	Level of assessment completed	Where can the full results of the assessment be accessed and viewed
Mahmoud Shaladan& Madeleine Healy , Cork County Council	Cork Co Council EPA water quality monitoring data	Desktop review of cited data.	This report.

Question 2 Confirm the design capacity of the waste water treatment plant and the current population equivalent (PE) being treated at the plant. Confirm current PE includes the maximum average weekly loading for the agglomeration having taken into account local festivals , peak holiday seasons ,etc.

The PE contributing to the septic tank is approximately 75.The current loading has been calculated on the basis of full occupancy of all dwellings within the agglomeration. An additional 10% has also been added on top of the calculated figures, therefore these quoted are the maximum loading figures.

Copy of Marine Insitute Monitoring Data -Cork Harbour Shellfish Water Monitoring

Year	Sample	Date	Time	Station	Latitude	Longitude
10	1050	21/01/10	14:35	Cork Harbour - North Channel	51.8837	-8.2670
10	1118	21/02/10	17:28	Cork Harbour - North Channel	51.8840	-8.2690
10	1185	31/03/10	14:54	Cork Harbour - North Channel	51.8837	-8.2677
10	1252	21/04/10	19:15	Cork Harbour - North Channel	51.8843	-8.2683
10	1319	14/05/10	14:58	Cork Harbour - North Channel	51.8842	-8.2688
10	1355	30/06/10	15:23	Cork Harbour - North Channel	51.8842	-8.2685
10	1448	13/07/10	14:15	Cork Harbour - North Channel	51.8842	-8.2670
10	1521	24/08/10	13:02	Cork Harbour - North Channel	51.8843	-8.2682
10	1589	24/09/10	16:25	Cork Harbour - North Channel	51.8840	-8.2683
10	1659	29/10/10	09:05	Cork Harbour - North Channel	51.8837	-8.2690
10	1049	21/01/10	13:22	Cork Harbour - Rostellan North	51.8577	-8.1963
10	1117	21/02/10	16:27	Cork Harbour - Rostellan North	51.8578	-8.1963
10	1184	31/03/10	14:11	Cork Harbour - Rostellan North	51.8577	-8.1967
10	1251	21/04/10	18:11	Cork Harbour - Rostellan North	51.8577	-8.1967
10	1318	14/05/10	14:11	Cork Harbour - Rostellan North	51.8577	-8.1963
10	1354	30/06/10	14:31	Cork Harbour - Rostellan North	51.8577	-8.1963
10	1447	13/07/10	15:31	Cork Harbour - Rostellan North	51.8577	-8.1963
10	1519	24/08/10	14:21	Cork Harbour - Rostellan North	51.8577	-8.1963
10	1587	24/09/10	15:21	Cork Harbour - Rostellan North	51.8575	-8.1963
10	1657	29/10/10	10:15	Cork Harbour - Rostellan North	51.8583	-8.1963
10	1048	21/01/10	12:59	Cork Harbour - Rostellan South	51.8492	-8.1953
10	1116	21/02/10	15:56	Cork Harbour - Rostellan South	51.8492	-8.1950
10	1183	31/03/10	13:46	Cork Harbour - Rostellan South	51.8492	-8.1957
10	1250	21/04/10	17:31	Cork Harbour - Rostellan South	51.8492	-8.1953
10	1317	14/05/10	13:45	Cork Harbour - Rostellan South	51.8492	-8.1938
10	1353	30/06/10	14:09	Cork Harbour - Rostellan South	51.8492	-8.1950
10	1446	13/07/10	15:15	Cork Harbour - Rostellan South	51.8492	-8.1953
10	1518	24/08/10	13:41	Cork Harbour - Rostellan South	51.8492	-8.1947
10	1586	24/09/10	15:11	Cork Harbour - Rostellan South	51.8492	-8.1958
10	1656	29/10/10	10:41	Cork Harbour - Rostellan South	51.8492	-8.1938
10	1520	31/08/10	12:36	Cork Harbour - Rostellan West	51.8493	-8.2050
10	1588	24/09/10	15:02	Cork Harbour - Rostellan West	51.8493	-8.2050
10	1658	29/10/10	11:43	Cork Harbour - Rostellan West	51.8493	-8.2050

Shellfish Water Regulations S.I. 268 of 2006			
Shellfish Waters Mandatory Limits	7.0 to 9.0	<40	
Shellfish Waters Guide Limits	n/a	12 to 38	
Compliance with Shellfish Waters Mandatory L	**yes**	**yes**	n/a
Compliance with Shellfish Waters Guide Limits	**yes**	**yes**	n/a

Programme compliance with SI 268 of 2006

Temp	pH	Salinity	DO (mg/L)	DO (% sat)	Colour	Suspended Solids (mg/l)
7.6		19	10.6	100		
6.2	8.5	28	10.1	100	5.6	20
10.3		25	9.2	96		
12.5	8.4	28	9.8	109		
13.2	8.2	32	9.5	110	5.4	16
21.1	8.2	33	8	109		
17.9	7.7	30	8.8	112		
17.9	8.1	32	7.3	94	9.3	39
15.2	7.9	33	9	111		
11.5	7.7	32	8.1	90		
7.7		17	10.7	101		
6.3	8.8	28	11	110	<4	9
11.3		28	9.8	105		
12.0	8.4	30	8.8	101		
16.0	8.4	32	12.7	155	4.7	17
21.4	8.5	33	11	152		
17.8	8.3	32	11.9	150		
18.3	8.1	33	7.8	101	5.3	53
15.8	7.9	34	10.5	131		
12.2	7.7	32	8.2	92		
7.2		25	10.1	99		
7.2	8.7	30	10.5	105	<4	4
10.2		21	10	102		
12.5	8.5	32	10.4	119		
15.4	8.3	31	12.7	153	<4	16
18.9	8.3	33	10.4	137		
18.2	8.3	32	11	142		
19.1	8.5	32	11.1	146	6	18
15.7	8.1	33	10.5	130		
11.9	7.7	32	8.1	92		
15.8	8.2	34	9.1	112	8.7	<2
15.4	8.0	34	9.2	113		
12.5	7.8	33	8.4	96		

≥70	eviation not >10					
≥80		n/a				
yes	n/a	**yes**				
yes	n/a	n/a				

Appendix 4: Bird Count Data, Saleen Creek and Cork Harbour 1998/1009 – 2007/2008 from I-WeBS

	National	Internati-onal	1998/ 1999	1999/ 2000	2000/ 2001	2001/ 2002	2002/2003	2003/2004	2004/ 2005	2005/ 2006	2006/ 2007	2007 /2008	Saleen Mean	Saleen Peak	Cork Harbour Mean	Cork Harbour Peak	% of mean total occurring at Saleen	% of peak total occurring at Saleen
Mute Swan	110	110	1	2	2	2	1	1		3			1	3	64	73	1.56	4.11
Canada Goose									13				3	13	18	23	17	57
Shelduck	**150**	**3,000**	**59**	**75**	**42**	**52**	**30**	**41**	**60**	**44**	**34**	**29**	**42**	**60**	**1,286**	**1,946**	**3.27**	**3.08**
Wigeon	**820**	**15,000**	**129**	**95**	**122**	**73**	**173**	**102**	**97**	**179**	**149**	**124**	**130**	**179**	**2,010**	**2,926**	**6.46**	**6.11**
Teal	**450**	**5,000**	**72**	**101**	**81**	**168**	**199**	**223**	**188**	**248**	**184**	**226**	**214**	**248**	**1,079**	**1,611**	**19.83**	**15.39**
Mallard	380	20,000	29	26	28	56	41	46	39	46	91	82	61	91	496	628	12.3	14.49
Shoveler	**25**	**400**					**4**	**7**		**4**			**2**	**7**	**43**	**62**	**4.65**	**11.29**
Red-breasted Merganser	**35**	**1,700**			**2**	**8**	**8**	**9**	**2**	**1**	**2**		**3**	**9**	**79**	**88**	**3.8**	**10.22**
Red-throated Diver	20	3,000								1			0	1	0	1	0	100
Little Grebe	**25**	**4,000**	**11**	**13**	**9**	**11**	**9**	**9**	**5**	**8**	**14**	**8**	**9**	**14**	**72**	**88**	**12.5**	**15.9**
Great Crested Grebe	**55**	**3,600**	**13**	**6**	**5**	**8**	**6**	**16**	**7**	**13**	**4**	**5**	**9**	**16**	**109**	**137**	**8.25**	**11.68**
Cormorant	**140**	**1,200**	**7**	**7**	**6**	**4**	**6**	**3**	**6**	**6**	**7**	**7**	**6**	**7**	**297**	**370**	**2.02**	**1.89**
Little Egret		1,300	9	4	7	10	10	10	23	17	17	18	17	23	134	166	12.68	13.86
Grey Heron	**30**	**2,700**	**7**	**4**	**8**	**6**	**5**	**7**	**6**	**6**	**4**	**5**	**6**	**7**	**87**	**135**	**6.9**	**5.18**
Moorhen	**20**						**2**			**1**			**0**	**1**	**37**	**55**	**0**	**1.81**
Oystercatcher	**680**	**10,200**	**129**	**172**	**136**	**150**	**175**	**147**	**135**	**137**	**94**	**176**	**138**	**176**	**1,721**	**2,076**	**8.02**	**8.48**
Ringed Plover	150	730	14		14		19		13	41			11	41	41	68	26.83	60.29
Lapwing	**2,100**	**20,000**	**36**	**8**	**7**	**2**		**2**	**12**		**1**		**3**	**12**	**3,947**	**4,864**	**0.08**	**0.25**
Knot	190	4,500								5		1	1	5	110	124	0.9	4.03
Dunlin	**880**	**13,300**	**256**	**31**	**26**	**10**	**164**	**28**	**64**	**6**	**37**	**54**	**38**	**64**	**4,204**	**4,785**	**0.09**	**1.34**
Ruff		12,500										1	0	1	1	3	0	33
Snipe		20,000						2	6	2	5	1	3	6	45	75	6.67	1.33
Black-tailed Godwit	**140**	**470**	**61**	**22**	**16**	**55**	**75**	**52**	**121**	**72**	**129**	**101**	**95**	**129**	**2,410**	**3,337**	**3.94**	**3.87**
Bar-tailed Godwit	**160**	**1,200**	**1**	**2**	**4**	**4**	**2**	**1**	**13**	**5**	**1**	**1**	**4**	**13**	**312**	**405**	**1.28**	**3.2**
Curlew	**550**	**8,500**	**121**	**81**	**82**	**89**	**96**	**91**	**103**	**90**	**115**	**152**	**110**	**152**	**1,636**	**2,317**	**6.72**	**6.56**
Common Sandpiper										1	1		0	1	2	4	0	25
Spotted Redshank		900	3	2								1	0	1	1	2	0	50
Greenshank	**20**	**2,300**	**8**	**10**	**13**	**11**	**12**	**4**	**9**	**12**	**8**	**10**	**9**	**12**	**68**	**83**	**13.23**	**14.46**

Redshank	**310**	**3,900**	**123**	**106**	**135**	**129**	**116**	**116**	**144**	**126**	**173**	**161**	**144**	**173**	**1,723**	**2,295**	**8.35**	**7.54**
Turnstone	**120**	**1,500**	**61**	**26**	**52**	**33**	**35**	**12**	**26**	**73**	**54**	**17**	**36**	**73**	**154**	**214**	**23.38**	**34.11**
Mediterranean Gull						1		4	4	5	6	48	13	48	22	48	59	100
Bonaparte's Gull											1			1	0	1	0	100
Black-headed Gull		20,000	190	177	167	107	176	57	187	184	221	212	172	221	2,373	2,954	7.25	7.48
Common Gull		16,000	7	47	41	88	264	39	103	21	65	84	62	103	220	290	28.18	35.51
Lesser Black-backed Gull		4,500	7	42	3	77	1	1	2	1	5	9	4	9	297	630	1.35	1.43
Herring Gull		13,000	2	3	4	1	6	3	7	3	5	3	4	7	56	123	7.14	5.69
Great Black-backed Gull		4,800	1	4	1	14	4	9	8	4	3	4	6	9	185	385	3.24	2.33
Sandwich Tern				2		22			2	6		3	2	6	49	225	4.08	2.66
Kingfisher					1		1		1	1	1	1	1	1	2	3	50	33.33

2009 harbour data (Data Source Harbour Monitoring by EPA) Coastal Waters Cork H

Sample_ID	Station_No	Sample_Label	Date_Surveyed	Time	Depth_Bed	epth_samp	Salinity
92488	LE380	LE380CR	01/07/2009	14:02:00	19.5	19.1	34.46
92219	LE380	LE380B	01/07/2009	11:58:00	15.4	14.7	33.94
101403	LE380	LE380BR	15/09/2009	16:33:00	19.7	19.4	32.9
101263	LE380	LE380B	15/09/2009	11:47:00	17.4	17.1	32.89
92499	LE380	LE380S	01/07/2009	11:58:00	15.4	0	32
92488	LE380	LE380CR	01/07/2009	14:02:00	19.5	0	30.02
101404	LE380	LE380SR	15/09/2009	16:33:00	19.7	0	25.76
101264	LE380	LE380S	15/09/2009	11:47:00	17.4	0	19.68
92211	LE610	LE610B	01/07/2009	12:12:00	16.5	16.1	34.87
92236	LE610	LE610S	01/07/2009	12:12:00	16.5	0	34.06
101285	LE610	LE610B	15/09/2009	12:11:00	16.1	15.9	33.26
101286	LE610	LE610S	15/09/2009	12:11:00	16.1	0	31.13
915	LE610	LE610B	22/01/2009	12:03:00			
945	LE610	LE610S	22/01/2009	12:03:00			

Mean Value	31.2475
95% percentile	
Median	32.9
90% percentile	

EQS Standard

Compliance

Note*-value dependent on Salinity

indicates parameters for compliance

arbour

Temp	pH	Secchi	O_Saturatic	DO_mgL	BOD	TON	NH3	PO4
17.11	8.17	2	97.8	7.7	3.1	0.101	0.045	5
17.25	8.12	2	96.9	7.6	2.2	0.051	0.057	7
15.04	8	2.5	98.9	8.1	0.49999	0.184	0.185	6
14.99	7.97	2.1	95.9	7.9	1.1	0.193	0.191	8
17.73	8.17	2	107.2	8.4	3.6	0.105	0.041	2.5
18.1	8.17	2	117.9	9.3	3.1	0.101	0.045	5
15.32	7.95	2.5	100.9	8.6		0.466	0.233	17
15.02	7.9	2.1	93.5	8.3	1	1.05	0.271	28
18.19	8.11	3.5	100.9	7.7	2.3	0.005	0.04	2.5
17.32	8.11	3.5	100.7	7.9	2.1	0.011	0.048	2.5
15.06	8.07	3.2	100.9	8.3	1.4	0.128	0.145	2.5
14.96	8	3.2	100.2	8.3		0.342	0.174	9
	7.96					0.185	0.032	22
	7.94					0.96	0.082	30
16.34083	8.045714		100.975		2.039999	0.277286	0.1135	10.5
			112.015		3.375			
								0.0065

>80%*
<120%*
Yes at DO lower limit
Yes at DO upper Limit

ce purposes

chl_a	Si_est	DIN	Free_NH3	WB_Name
6.8	87	0.146	0.00248	Cork Harbour
1.4	130	0.108	0.00284	Cork Harbour
2.7	460	0.369	0.00601	Cork Harbour
2	401	0.384	0.00578	Cork Harbour
7.1	80	0.146	0.00236	Cork Harbour
6.8	87	0.146	0.00266	Cork Harbour
4.5	1010	0.699	0.0069	Cork Harbour
2.3	1590	1.321	0.00702	Cork Harbour
1.1	95	0.045	0.00208	Cork Harbour
1.8	96	0.059	0.00235	Cork Harbour
2.1	297	0.273	0.00551	Cork Harbour
4.3	591	0.516	0.00562	Cork Harbour
4	412	0.217		Cork Harbour
1.1	1460	1.042		Cork Harbour
3.42857143	485.4286	0.390786	0.004300833	

2.5	0.245
6.8	

5.0(Med)&10 (90%)	≤0.25 at 34.5% salinity
Yes meets high -good status	Yes