

Appendix H

Continuous Discharges

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CONTINUOUS DISCHARGES

- H1. Continuous Wastewater Discharges in the Greater Dublin Area**

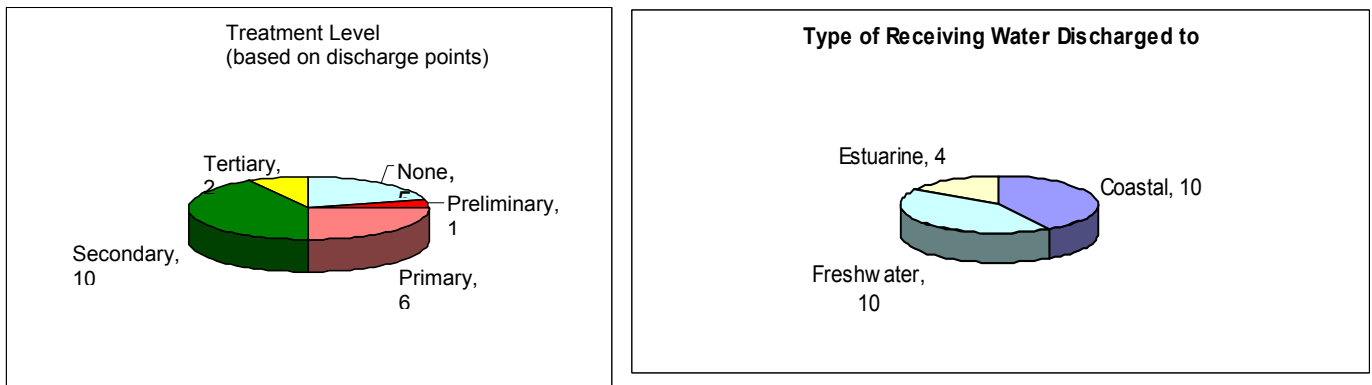
- H2. Trade and Industrial Discharges to Watercourses in the Liffey Catchment**

H1. CONTINUOUS WASTEWATER DISCHARGES IN THE GREATER DUBLIN AREA

H1.1 MWWTW UPGRADES IN THE GSDSD STUDY AREA

H1.1.1 Introduction

There are currently 24 wastewater discharge points serving populations greater than 1000 (year 2000 data) which impact on rivers, estuarine and coastal waters within the GSDSD area (refer **Table H3** below). When analysed in terms of p.e., 21% of waste arisings did not receive any treatment, 1% received preliminary treatment, 72% received tertiary treatment, 3% received secondary treatment, 3% received primary treatment and 1% received preliminary treatment and 21% did not receive treatment.



GSDSD Area Wastewater Discharge Characteristics

It is planned that two of the current municipal wastewater treatment plants will be decommissioned (Newcastle and Saggart) with the sewage transferred to the sewerage network draining to the Ringsend WwTW in Dublin. Both of these plants have a significant impact on their respective receiving waters (Camac and Griffeen) and the removal of these discharges should greatly enhance the quality of the receiving waters (Refer Camac Special Study Area Report – MCOS, 2002).

H1.1.2 Osberstown and Leixlip

Osberstown and Leixlip MWWTW's are the largest in the Liffey catchment and therefore their potential to impact on the quality of the receiving water is considerable. Both of these plants are also situated in areas that are experiencing significant increases in both population numbers and industrial developments. Because of these increases both plants underwent significant upgrades to cope with the demands placed on them. The Osberstown plant has been upgraded to a design p.e. of 80,000 with secondary treatment with nutrient reduction and the Leixlip plant has been upgraded to a design p.e. of 90,000 with similar treatments. The construction of the Leixlip plant was completed in the summer of 1999 and was commissioned in July 2000. The construction of the Osberstown plant was completed in the summer of 2000 and was commissioned in February 2002.

H1.1.3 Water Quality

Table H1 shows the water quality at two sites, one upstream of the Osberstown MWWTW and one downstream. From this table it can be seen that the MWWTW had a significant effect on both biological and physic/chemical status of the river. The biological water quality at the downstream site deteriorated considerably in 1998. This was primarily due to rapid expansion of many of the towns in North Kildare that fed into and overloaded the old works at Osberstown. Improvements in the water quality downstream of the discharge point are easily discerned following completion of the construction work in the summer of 2000.

A similar improvement can be seen with the water quality downstream of the Leixlip plant in **Table H2**. This was especially true of the ammonia concentrations. The median ammonia concentrations went from 0.4mgN/l in 1994 to 0.09mgN/l in 2001. There has also been an improvement in the biological water quality which is likely to be attributable to the up-grade of the Leixlip plant.

Table H1 Water Quality Upstream and Downstream of Osberstown MWWTP

Date	Q Value	Med MRP	Med NH3
Upstream of Osberstown (Victoria Bridge)			
1991-94	4	0.01	0.02
1998	4		
1999	3-4		
2000	4	0.01	0.02
2001		0.01	0.02
Downstream of Osberstown (Castlekeely Ford)			
1991-94	3-4		
1998	2		
1999	2-3		
2000	3-4	0.114	0.103
2001		0.046	0.036

In the Liffey catchment, there was a total of 11 MWWTW's, of which 7 have either received significant upgrades, or have upgrades planned for the near future. Upgrade work on the MWWTWs and sewer networks for the Liffey catchment will entail a total expenditure in excess of €45 million.

Considerable sums of money have been spent on the improvement and re-direction of sewage in the Liffey catchment. From the current water quality results it would seem that this money has been well spent. Obviously, further monitoring is required to ascertain the full effects of the closure of the Saggart, and Newcastle MWWTWs but it is predicated that the effects on the receiving water quality will be considerable.

Table H2 Water Quality Upstream and Downstream of Leixlip MWWTP

Date	Q Value	Med MRP	Med NH3
Upstream of Leixlip (Leixlip Res)			
1991-94			
1998			
1999	3-4		
2000	3-4	0.11	0.05
2001		0.08	0.06
Downstream of Leixlip (Lucan Bridge)			
1991-94	2-3	0.17	0.40
1998	2-3		
1999	2-3		
2000	3	0.17	0.06
2001		0.10	0.09

Sanitary Authority	Agglomeration	Current Level of Treatment (March 2003)	P.E. (2000)	Discharges to	Designated Sensitive Area under UWWT Regulations
Meath	Rathoath	Secondary	2,500	Freshwater	No
	Ashbourne	Secondary	7,500	Freshwater	No
	Dunboyne	Primary	5,000	Freshwater	No
Fingal	Balbriggan	None	11,201	Coastal	No
	Skerries	Primary	10,380	Coastal	No
	Rush	None	7,731	Coastal	No
	Lusk	Primary	2,856	Estuarine	No
	Portrane	Secondary	8,546	Coastal	No
	Swords	Secondary	36,159	Estuarine	Yes
	Malahide	Secondary	18,597	Estuarine	No
	Howth	None	45,684	Coastal	No
Dublin	North Dublin	None	505,969	Coastal	No
	Ringsend	Tertiary	1,903,606	Estuarine	Yes
South Dublin	Newcastle	Secondary	1,200	Freshwater	No
	Saggart	Secondary	2,404	Freshwater	No
Kildare	Leixlip	Tertiary	75,674*	Freshwater	Yes
	Osberstown	Tertiary	68,490	Freshwater	Yes
	Ballymore Eustace	Primary	2,689	Freshwater	Yes
Dun Laoghaire-Rathdown	Coliemore	None	1,000	Coastal)	No
	Corke Abbey	Secondary	2,000	Coastal)	No
	Shanganagh	Primary	65,700	Coastal)	No
Wicklow	Bray	Preliminary	40,000	Coastal)	No
	Enniskerry	Secondary	1,800	Freshwater	No

Source: EPA, 2002. Urban Wastewater Discharges in Ireland. An Interim Report for the Year 2000.

*2002 data

Table H3 Agglomerations in the Greater Dublin Strategic Drainage Study Area

Location	Year	BOD			COD			TSS		
		No. Samples	No. Samples >25mg/L	No. Samples >50 mg/L	No. Samples	No. Samples >125mg/L	No. Samples >250 mg/L	No. Samples	No. Samples >35mg/L	No. Samples >87.5 mg/L
Rathoath	2000	9	2	1	5	1	0	8	2	1
Ashbourne	2000	9	2	0	5	1	0	8	3	1
Dunboyne	1998	10	3	0	10	0	0	10	1	0
Dunshaughlin	2000	9	3	1	7	1	0	9	5	1
Portrane	2000	32	24	4	40	13	2	40	37	3
Malahide	1999	38	1	0	41	0	0	43	3	1
Swords	2000	27	6	1	42	4	0	42	9	0
Newcastle	2000	10	7	1	14	8	2	14	8	1
Saggart	2000	10	6	0	13	1	0	13	4	0
Leixlip	2000	37	0	0	37	1	0	37	2	1
Prosperous	2000	2	2	2	2	2	2	2	2	2
Osberstown	2000	175	20	4	190	10	0	190	41	11
Corke Abbey	2000	19	12	6	34	23	12	33	25	11
Enniskerry	2000	4	0	0	4	0	0	4	0	0

* Note: No data for primary wastewater treatment plants, i.e., Ballbriggan/Skerries, North Dublin, Howth, Rush, Lusk, Ringsend, Ballymore Eustace, Colimore, Bray & Shanganagh.

Source: EPA, 2002. Urban Wastewater Discharges in Ireland. An Interim Report for the Year 2000 & A Report for the years 1998 and 1999.

Table H4 Effluent Quality from Secondary Wastewater Treatment Plants for 2000

INSERT FIGURE Figure H1

H2. TRADE AND INDUSTRIAL DISCHARGES TO WATERCOURSES IN THE LIFFEY CATCHMENT*Table H5 Summary of Section 4 Licensed Discharges in the Liffey*

Names of Licence	Receiving Water	Local Authority	Description of Activity
Simple Seas	Liffey		
Shankill Fish Farm	Brittas	South Dublin	Fish Farm
Toughers Restaurant	Groundwater	Kildare Co. Co.	Restaurant
Kildare Hotel and Country Club	Groundwater	Kildare Co. Co.	Hotel
Holy Faith sisters	Liffey		
Tulfarris Hotel and Country Club	Groundwater	Wicklow Co. Co.	Hotel & Country Club
Hole in the Wall Gant Ballymore Eustace	Barrettstown Stream		
Humphrystown House	Groundwater	Wicklow Co. Co.	Restaurant
Irish Equine Centre	Morell	Kildare Co. Co.	Irish Equine Centre
Rathcoole Products Limited	Groundwater	South Dublin Co. Co.	Industrial Estate
Camphill Communities	Liffey	Kildare Co. Co.	Dunshane House
Kilcullen Properties	Liffey	Kildare Co. Co.	Properties
Gledswood Ltd.	Fettercairn Stream	South Dublin Co. Co.	Country House
Spollen Concrete	Adamstown Stream	South Dublin Co. Co.	Industry
Breton Roconcrete Limited	Inflow to Pollaphuca	Wicklow Co. Co.	Industry

Table H6 IPC Licence Applications for the Liffey

Names of Activity	Receiving Water	Location of Activity	Class of Activity
A.B. Converters Ltd.	n/a	Blessington	Surface Coatings
AHP Manufacturing B.V. T/A Wyeth Medica Irl.	n/a	Old Connell	Surface Coatings
AHP Manufacturing B.V. T/A Wyeth Medica Irl.	n/a	Old Connell	Surface Coatings
BOC Gases Ireland Ltd.	Camac	Bluebell	Chemicals
Boran Plastic Packaging Ltd.	n/a	Naas	Surface Coatings
Brittas Plastics Ltd.	Camac	Saggart	Surface Coatings
C V P Ltd.	n/a	Ballyfermot	Surface Coatings
Coates of Ireland Ltd. t/a Coates Lorrilleux	Liffey	Mill Lane	Chemicals
Colfix (Dublin) Ltd.	Cammock	Dublin 12	Chemicals
Curragh Tintawn Carpets Ltd.	N/a	Co. Kildare	Wood, Paper, Textiles & Leather
Donnelly Mirrors Ltd.	Morell	Naas	Surface Coatings
F&T Buckley Ltd. (Dublin)	n/a	Off Longmile Road	Wood, Paper, Textiles & Leather
Galco Steel Ltd.	n/a	Ballymount Road	Metals
Galvanocor Ireland Ltd.	n/a	Newbridge	Chemicals
General Paints Ltd.	Liffey	Celbridge	Chemicals
Guinness Ireland Group	n/a	James Street	Food and Drink
HDS Energy Ltd.	n/a	Co. Kildare	Metals
Hewlett Packard (Manufacturing) Ltd.	Liffey	Rinawade Upr. & Lr.	Surface Coatings
Hitech Plating Ltd.	Robinhood	Ballymount Ind. Estate	Surface Coatings
Intel Ireland Ltd.	Rye Water	Leixlip	Other Activities
Irish Printed Circuits Ltd.	Robinhood	Ballymount Drive	Other Activities
Jamestown Metal Resources Ltd.	n/a	Inchicore	Chemicals
Kayfoam Woolfson	n/a	Bluebell Ind. Estate	Chemicals
L.P.D. (Ireland) Ltd./ Weathercrete Coatings Ltd.	n/a	Naas	Surface Coatings
Loctite (Ireland) Ltd. (Ballyfermot)	n/a	Ballyfermot	Metals
Lufthansa Airmotive Ireland Ltd.	Camac	Rathcoole	Other Activities
Metal Processors	n/a	Clondalkin	Metals
Oral –B Laboratories Islands Limited	n/a	Newbridge	Surface Coatings
Oral B Laboratories Islands Ltd.	Liffey	Newhall	Surface Coatings
Our Lady's Hospital for Sick Children	Abandoned	Crumlin	Waste
P.D.M. Ltd.	Kill	Kill	Wood, Paper, Textiles
Packaging Inks & Coatings	n/a	Naas Road	Chemicals
Punch Printing Inks	n/a	Bluebell Ind. Estate	Chemicals
Sun Chemical Inks Ltd/	n/a	Bluebell	Chemicals
T.J. O'Mahony & Sons Ltd.	n/a	Tallaght	Wood, Paper, Textiles
Trimite Truecoat Ltd.	n/a	Naas	Chemicals
Ultra Packaging Ltd.	n/a	Allied Industrial Estate	Surface Coatings

INSERT Figure H2 - App H Wastewater Discharges