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## **ATTACHMENT B**

## NEWSPAPER NOTICE



### APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE WATER DISCHARGE LICENCE

Meath County Council, County Hall, Railway Street, Navan, Co. Meath intends to apply to the Environmental Protection Agency for a Waste Water Discharge Licence for an existing discharge at the Wastewater Treatment Plant in the townland of **Leggagh, Castletown, Navan**, County Meath (National Grid Reference 284,969E, 281,999N). The treatment process consists of a package aeration plant.

The application relates to the following discharge point:

The primary discharge point PSW1 – 285,045E, 281,989N (Receiving Water – Tributary of River Dee)

A copy of the following documents shall, as soon as is practicable after receipt by the Agency, be available for inspection or purchase at the headquarters of the Environmental Protection Agency, P.O. Box 3000, Johnstown Castle Estate, Co. Wexford and at Meath County Council, County Hall, Railway Street, Navan, Co. Meath

- (i) the application for a waste water discharge licence
- (ii) such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application.

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# Site Notice

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## Meath County Council

### "APPLICATION TO THE ENVIRONMENT PROTECTION AGENCY FOR A WASTE WATER CERTIFICATE OF AUTHORISATION"

**Applicant:** Meath County Council, County Hall, Railway Street, Navan, County Meath

Meath County Council, County Hall, Railway Street, Navan, Co. Meath intends to apply to the Environmental Protection Agency for a Waste Water Certificate of Authorisation for an existing discharge at the Wastewater Treatment Plant in the townland of Leggagh, Castletown, Navan, County Meath (National Grid Reference 284,969E, 281,999N). The treatment process consists of a package aeration plant. The application relates to the following discharge point:

The primary discharge point PSW1 – 285,045E, 281,989N (Receiving Water – Tributary of River Dee)

A copy of the:

- (i) Waste Water Discharge Certificate Application, and;
- (ii) Such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application;

shall, as soon as is practicable after receipt by the Agency, be available for inspection or purchase at the headquarters of the Environmental Protection Agency, Johnstown Castle Estate, County Wexford, and at the offices of Meath County Council, County Hall, Navan, County Meath.

Submissions in relation to the application may be made to the Agency at its headquarters: Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, County Wexford.







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## **ATTACHMENT D**



**JENNINGS O'DONOVAN**  
& PARTNERS  
CONSULTING ENGINEERS

Finisklin Business Park  
Sligo

T: 071-91 61416 / 071-91 29292  
F: 071-91 61080

E: Info@jodireland.com  
W: www.jodireland.com

4654/122/001/YMcM

12<sup>th</sup> November 2009

Ms. Mary Boothman,  
Development Application Unit,  
Department of the Environment,  
Dùn Scéine,  
Hardcourt Lane,  
**Dublin 2.**

**Re: EPA Waste Water Discharge Licence for 16 Villages in County Meath**

Dear Mary,

Jennings O'Donovan & Partners are preparing EPA Waste Water Discharge Certificates Applications for Meath sewerage schemes in County Meath listed below:

1. Ardcah Sewerage Scheme (discharge to groundwater)
2. Ballinabrackey Sewerage Scheme (discharges to surface water)
3. Batterstown Sewerage Scheme (discharges to surface water)
4. Bellewstown Sewerage Scheme (discharges to Groundwater)
5. Bohermeen Sewerage Scheme (discharges to surface water)
6. Castletown Sewerage Scheme (discharges to surface water)
7. Clonalvy Sewerage Scheme (discharges to groundwater)
8. Carnaross Sewerage Scheme (discharges to groundwater)
9. Cortown Sewerage Scheme (discharges to groundwater)
10. Dunderry Sewerage Scheme (discharges to surface water)
11. Hill of Tara Sewerage Scheme (discharges to groundwater)
12. Kilberry Sewerage Scheme (discharges to surface water)
13. Lloyd, Kells Sewerage Scheme (discharges to surface water)
14. Lobinstown Sewerage Scheme (discharges to surface water)
15. Robinstown Sewerage Scheme (discharges to surface water)
16. Skryne Sewerage Scheme (discharges to surface water)

Please find enclosed site location drawings together with the local designated areas at the sixteen Wastewater Treatment Plants.



Section F of the application relating to the NPWS, requires us to give details of any designation that applies to the receiving water. After consultation with the EPA they advised us to get in contact with you to get a clear picture of the boundary of the SAC and SPA and in addition we require a letter from the NPWS stating whether the discharge is deemed impact the receivers waters or if an "Appropriate Assessment" is to be carried out.

We would be grateful for your input at your earliest convenience as the applications have to be submitted to the EPA by the 22<sup>nd</sup> of December 2009. If you have any questions regarding the above or wish to discuss the application, please do not hesitate to contact this office.

Yours sincerely,



**Yvonne McMonagle**  
**for: Jennings O'Donovan & Partners**

**Encl.**

**c.c. Mr. Gerry Boyle, Meath County Council**

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## Yvonne McMonagle

---

**From:** Yvonne McMonagle  
**Sent:** 02 December 2009 12:04  
**To:** TONY MC NALLY (Labs)  
**Cc:** 'Mark Magee'  
**Subject:** FW: Meath Villages Wastewater Certificates License Application



Drg F1



Drg F1

Castletown).pdf (162 binstown).pdf (164

Dear Sir Tony,

I am currently completing 2 discharge certificates application for Meath County Council as listed below:

1. Castletown Sewerage Scheme (discharges to a tributary of the River Dee)
2. Lobinstown Sewerage Scheme (discharges to a tributary of the Kilarity water)

A specification of the license application is to get in contact with the local RBD office about the need to monitor certain substances listed in Annex X and XIII of the Water Framework Directive in the receiving waters. Please find attached the associated drawings showing the location of the waste water treatment plants and discharge points.

The section of the application which relates to the monitoring of the substances listed in Annex 8 and 10 are in section 9. After consultation with the EPA they advised us to get in contact with yourselves and to see if any of these 69 substances are present in this receiving water and if there is a need for us to monitor some of these parameters. We also require a letter from yourselves to confirm your findings.

According to the EPA they have been in contact with yourselves about this issue and that you will be aware what is needed for the application. If you have any questions about this section you can contact the EPA ring or if there is someone else in the ERBD office I could get in contact with to gather the data.

Looking forward to hearing from you.

Regards,  
Yvonne McMonagle,  
Jennings O'Donovan & Partners,  
Consulting Engineers,  
Finisklin Business Park,  
Sligo.  
Tel.: 071 9161416  
Fax: 071 9161080  
Email: ymcmonagle@jodireland.com

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## **ATTACHMENT D.1**



Table 1: Results for Castletown WWTP samples

Date 2007	25-Feb-09	24-Apr-09	14-Sep-09									
Parameter	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf
BOD mg/l	-	-	-									
COD mg/l	-	-	-									
TSS mg/l	-	-	-									
Tot P mg/l	-	-	-									
Tot N mg/l	-	-	-									
		220	473									
Parameter	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff
BOD mg/l	5.2	12.3	11.1									
COD mg/l	45.3	70	56.3									
TSS mg/l	10.4	12.8	29.2									
Tot P mg/l	0.62	2.09	1.4									
Tot N mg/l	6.26	8.89	13.9									

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Table 1: Results for Castletown WWTP samples

Date 2008	02-May-08	09-Oct-08	18-Nov-08	25-Nov-08										
Parameter	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf
BOD mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-
COD mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TSS mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tot P mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tot N mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parameter	EH	EH	EH	EH	EH	EH	EH	EH	EH	EH	EH	EH	EH	EH
BOD mg/l	10.35	3.61	5.6	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
COD mg/l	51.2	43.1	39.2	39.8	39.8	39.8	39.8	39.8	39.8	39.8	39.8	39.8	39.8	39.8
TSS mg/l	17	11.2	15.2	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4
Tot P mg/l	2.44	5.18	0.747	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672	0.672
Tot N mg/l	16.5	8.65	3.48	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87

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# MEATH VILLAGES EFFLUENT DISCHARGE SURVEY

## *EXECUTIVE SUMMARY*

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### **Client:**

Meath County Council

### **Consulting Engineers:**

Jennings O'Donovan & Partners  
Consulting Engineers  
Finisklin  
Sligo



Unit 9, Block A,  
Centrepoint Business Park  
Oak Road  
Dublin 12  
Tel: (01) 4605912  
Fax: (01) 4605913

Issued 24<sup>th</sup> November 2009

## Castletown

### Site 1

Average Volume - 29.5 M3/Day @225/h/day - = 131 pe  
 Maximum Volume - 79.9 M3/Day @225/h/day - = 355pe  
 Maximum Rate of Discharge - 38.2 l/s  
 Method of flow measurement - Area velocity flow monitor

Influent Sampling Point: Last M/H before treatment works  
 Effluent Sampling Point: Outlet from treatment area

**Table 1: Site 1 Sample Analysis Results for the 9<sup>th</sup> November**

Parameter	COD mg/l	pH mg/l	BOD mg/l	Sus. Solids mg/l	Phosphorous ( as P ) mg/l	T. Nitrogen ( as P ) mg/l	Ammonia mg/l
Influent	680	7.9	236	252	5.2	58.11	21.017
Effluent	13	7.1	6	13	0.4	6.747	0.562

**Table 2: Site 1 Sample Analysis Results for the 10<sup>th</sup> November 2009**

Parameter	COD mg/l	pH mg/l	BOD mg/l	Sus. Solids mg/l	Phosphorous ( as P ) mg/l	T. Nitrogen ( as P ) mg/l	Ammonia mg/l
Influent	182	7.3	38	122	0.96	15.625	0.173
Effluent	64	7.3	24	56	1.2	15.53	0.409

Summary: Daily Volumes (m3) .

Date	MaxFlow Time	MaxFlow (l/s)	MinFlow Time	MinFlow (l/s)	AveFlow (l/s)	TotVolume (m3)
5-NOV-09	20:26	1.0	17:32	0.0	0.1	2.3
6-NOV-09	7:38	1.2	0:02	0.0	0.1	10.9
7-NOV-09	11:22	0.4	0:16	0.0	0.0	3.4
8-NOV-09	12:52	0.7	0:00	0.0	0.0	3.7
9-NOV-09	21:20	5.8	0:00	0.0	0.8	71.2
10-NOV-09	12:20	3.0*	4:12	0.0	0.1	10.6
11-NOV-09	20:56	10.1	0:02	0.0	0.9	79.9
12-NOV-09	12:26	38.2	12:28	0.0	0.8	64.8
13-NOV-09	23:58	4.9	0:00	0.0	0.0	1.0
14-NOV-09	0:30	5.6	17:08	0.0	0.4	34.0
15-NOV-09	23:34	2.9	0:54	0.0	0.1	8.2
16-NOV-09	6:48	11.3	3:02	0.0	0.9	72.7
17-NOV-09	14:08	4.2	1:18	0.0	0.1	12.2
18-NOV-09	0:40	7.0	1:04	0.0	0.4	38.2
19-NOV-09	4:36	8.6	5:52	0.0	1.4	
-NOV-		38.2		0.0	0.4	413.1

\* Crew on site during highlighted peak flows. These readings should be ignored



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## **ATTACHMENT D.2**





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## **ATTACHMENT E.2**



# MEATH VILLAGES EFFLUENT DISCHARGE SURVEY

## *EXECUTIVE SUMMARY*

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### **Client:**

Meath County Council

### **Consulting Engineers:**

Jennings O'Donovan & Partners  
Consulting Engineers  
Finisklin  
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Tel: (01) 4605912  
Fax: (01) 4605913

Issued 24<sup>th</sup> November 2009

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**Table 1: Site 1 Sample Analysis Results for the 9<sup>th</sup> November**

Parameter	COD mg/l	pH mg/l	BOD mg/l	Sus. Solids mg/l	Phosphorous ( as P ) mg/l	T. Nitrogen ( as P ) mg/l	Ammonia mg/l
Influent	680	7.9	236	252	5.2	58.11	21.017
Effluent	13	7.1	6	13	0.4	6.747	0.562

**Table 2: Site 1 Sample Analysis Results for the 10<sup>th</sup> November 2009**

Parameter	COD mg/l	pH mg/l	BOD mg/l	Sus. Solids mg/l	Phosphorous ( as P ) mg/l	T. Nitrogen ( as P ) mg/l	Ammonia mg/l
Influent	182	7.3	38	122	0.96	15.625	0.173
Effluent	64	7.3	24	56	1.2	15.53	0.409

Summary: Daily Volumes (m3) .

Date	MaxFlow Time	MaxFlow (l/s)	MinFlow Time	MinFlow (l/s)	AveFlow (l/s)	TotVolume (m3)
5-NOV-09	20:26	1.0	17:32	0.0	0.1	2.3
6-NOV-09	7:38	1.2	0:02	0.0	0.1	10.9
7-NOV-09	11:22	0.4	0:16	0.0	0.0	3.4
8-NOV-09	12:52	0.7	0:00	0.0	0.0	3.7
9-NOV-09	21:20	5.8	0:00	0.0	0.8	71.2
10-NOV-09	12:20	3.0*	4:12	0.0	0.1	10.6
11-NOV-09	20:56	10.1	0:02	0.0	0.9	79.9
12-NOV-09	12:26	38.2	12:28	0.0	0.8	64.8
13-NOV-09	23:58	4.9	0:00	0.0	0.0	1.0
14-NOV-09	0:30	5.6	17:08	0.0	0.4	34.0
15-NOV-09	23:34	2.9	0:54	0.0	0.1	8.2
16-NOV-09	6:48	11.3	3:02	0.0	0.9	72.7
17-NOV-09	14:08	4.2	1:18	0.0	0.1	12.2
18-NOV-09	0:40	7.0	1:04	0.0	0.4	38.2
19-NOV-09	4:36	8.6	5:52	0.0	1.4	
-NOV-		38.2		0.0	0.4	413.1

\* Crew on site during highlighted peak flows. These readings should be ignored



Table 1: Results for Castletown WWTP samples

Date 2007      25-Feb-09    24-Apr-09   14-Sep-09

Parameter	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf
BOD mg/l	-	-	-									
COD mg/l	-	-	-									
TSS mg/l	-	-	-									
Tot P mg/l	-	-	-									
Tot N mg/l	-	-	-									
		220	473									
Parameter	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff
BOD mg/l	5.2	12.3	11.1									
COD mg/l	45.3	70	56.3									
TSS mg/l	10.4	12.8	29.2									
Tot P mg/l	0.62	2.09	1.4									
Tot N mg/l	6.26	8.89	13.9									

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Table 1: Results for Castletown WWTp samples

Date	2008	02-May-08	09-Oct-08	18-Nov-08	25-Nov-08										
Parameter	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf
BOD mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
COD mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TSS mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tot P mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tot N mg/l	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Parameter	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM	EM
BOD mg/l	10.35	3.61	5.6	5.5											
COD mg/l	51.2	43.1	39.2	39.8											
TSS mg/l	17	11.2	15.2	18.4											
Tot P mg/l	2.44	5.18	0.747	0.672											
Tot N mg/l	16.5	8.65	3.48	8.87											

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## **ATTACHMENT E.3**



## Castletown

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## **ATTACHMENT E.4**

For Quality and Excellence in Laboratory Analysis



Quality Systems and Laboratory Services

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Rosslare Road,  
Wexford  
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Email: info@qlab.ie

**Test Report**  
**Copy**

**Customer:** Jennings O'Donovan & Pa  
Consulting Engineers  
Finisklin Business Park  
Sligo  
Co. Sligo  
**Account.:** 9413

**Report No.:** 51729  
**Report Date:** 01/12/2009  
**Received Date:** 11/11/2009  
**Analysis Date:** 12/11/2009  
**Order No.:**  
**Page:** 1 of 2  
**Revision Date:**

**Sample ID:** 77293

**Description:** Downstream Sample taken @ Castletown 11.11.09 10.50hrs by Conor (Q-Lab)

**Ref No:**

ID	Test	SOP	Results
<input type="checkbox"/> 77293	Total Nitrogen as N, mg/l	STM-C-13.1.0	4.0
<input type="checkbox"/> 77293	Copper as Cu, mg/l	Subcontracted	0.0009
<input type="checkbox"/> 77293	Chromium as Cr mg/l	Subcontracted	0.0013
<input type="checkbox"/> 77293	Arsenic as As mg/l	Subcontracted	0.0022
<input type="checkbox"/> 77293	Sulphates as SO <sub>4</sub> , mg/l	STM-C-18.2.0	14
<input type="checkbox"/> 77293	Ortho Phosphates (as mg P/L)	STM-C-20.2.0	1.47
<input type="checkbox"/> 77293	Total Phosphorous as P, mg/l	STM-C-19.2.0	2.02
<input checked="" type="checkbox"/> 77293	pH value	STM-C-3.1.00	6.92
<input type="checkbox"/> 77293	Nitrites as NO <sub>2</sub> , mg/l	STM-C-8.2.04	0.093
<input type="checkbox"/> 77293	Zinc as Zn mg/l	Subcontracted	0.0524
<input type="checkbox"/> 77293	Dissolved oxygen, mg/l	STM-C-10.3.0	8.40
<input checked="" type="checkbox"/> 77293	COD mg/l	STM-C-11.2.0	286
<input checked="" type="checkbox"/> 77293	BOD, mg/l	STM-C-10.2.0	3.7
<input type="checkbox"/> 77293	Ammonia as NH <sub>3</sub> -N, mg/l	STM-C-7.2.04	0.49
<input checked="" type="checkbox"/> 77293	Suspended Solids, mg/l	STM-C-2.1.00	350
<input checked="" type="checkbox"/> 77293	Conductivity, uS/cm @ 20°C	STM-C-4.1.00	514
<input checked="" type="checkbox"/> 77293	Nitrates as NO <sub>3</sub> mg/l	STM-C-9.3.08	<0.5
<input type="checkbox"/> 77293	Simazine ug/l	Subcontracted	<0.01
<input type="checkbox"/> 77293	Xylenes ug/l	Subcontracted	<0.5
<input type="checkbox"/> 77293	Tributyltin ug/l	Subcontracted	<0.02
<input type="checkbox"/> 77293	Boron as B mg/l	Subcontracted	0.02
<input type="checkbox"/> 77293	Nickel as Ni mg/l	Subcontracted	0.0070



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Quality Systems and Laboratory Services

P.O. Box 27,  
Strandfield Business Park,  
Rosslare Road,  
Wexford  
Tel/Fax 053 9145600  
Email: info@qlab.ie

**Test Report**  
**Copy**

Customer: Jennings O'Donovan & Pa  
Consulting Engineers  
Finisklin Business Park  
Sligo  
Co. Sligo  
Account.: 9413

Report No.: 51729  
Report Date: 01/12/2009  
Received Date: 11/11/2009  
Analysis Date: 12/11/2009  
Order No.:  
Page: 2 of 2  
Revision Date:

<input type="checkbox"/>	77293	Fluoride as F, mg/l	Subcontracted	<0.1
<input type="checkbox"/>	77293	Phenols, ug/l	Subcontracted	<0.5
<input type="checkbox"/>	77293	Cyanide mg/l	Subcontracted	<0.005
<input type="checkbox"/>	77293	Toluene ug/l	Subcontracted	<0.5
<input type="checkbox"/>	77293	Lead as Pb, mg/l	Subcontracted	0.0037
<input type="checkbox"/>	77293	Dichloromethane ug/l	Subcontracted	<5.0
<input type="checkbox"/>	77293	Atrazine ug/l	Subcontracted	<0.01
<input type="checkbox"/>	77293	Barium as Ba mg/l	Subcontracted	0.0628
<input type="checkbox"/>	77293	Selenium as Se mg/l	Subcontracted	0.0005
<input type="checkbox"/>	77293	Mercury as Hg mg/l	Subcontracted	<0.00002
<input type="checkbox"/>	77293	Cadmium as Cd mg/l	Subcontracted	0.0003
<input checked="" type="checkbox"/>	77293	Total Hardness as CaCO <sub>3</sub> , mg/l	STM-C-6.1.00	298
<input type="checkbox"/>	77293	Temperature, °C	STM-C-41.1.0	7.1

Comments:

Report Authorised By:

*Peter O'Byrne*

Peter O'Byrne Chem. Lab. Manager

Results relate only to Items Tested. Report must not be reproduced except in full without prior consultation.

☒ Indicates Accredited Test. Opinions and Comments are not included in the scope of Accreditation



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### Test Report

**Customer:** Jennings O'Donovan & Pa  
Consulting Engineers  
Finisklin Business Park  
Sligo  
Co. Sligo  
**Account.:** 9413

**Report No.:** 51727  
**Report Date:** 02/12/2009  
**Received Date:** 11/11/2009  
**Analysis Date:** 12/11/2009  
**Order No.:**  
**Page:** 1 of 2  
**RevisionDate:**

**Sample ID:** 77291

**Description:** Final Effluent Sample taken @ Castletown 11.11.09 10:00hrs by Conor (Q-Lab)

**Ref No:**

ID	Test	SOP	Results
<input type="checkbox"/> 77291	Total Nitrogen as N, mg/l	STM-C-13.1.0	9.6
<input type="checkbox"/> 77291	Copper as Cu, mg/l	Subcontracted	0.007 <i>0.007</i>
<input type="checkbox"/> 77291	Chromium as Cr mg/l	Subcontracted	<0.001 <i>0.001</i>
<input type="checkbox"/> 77291	Arsenic as As mg/l	Subcontracted	0.0004 <i>0.0004</i>
<input type="checkbox"/> 77291	Sulphates as SO <sub>4</sub> , mg/l	STM-C-18.2.0	52
<input type="checkbox"/> 77291	Ortho Phosphates (as mg P/L)	STM-C-20.2.0	0.29
<input type="checkbox"/> 77291	Total Phosphorous as P, mg/l	STM-C-19.2.0	0.55
<input checked="" type="checkbox"/> 77291	pH value	STM-C-3.1.00	7.35
<input type="checkbox"/> 77291	Nitrites as NO <sub>2</sub> , mg/l	STM-C-8.2.04	0.030
<input type="checkbox"/> 77291	Zinc as Zn mg/l	Subcontracted	0.0124
<input type="checkbox"/> 77291	Dissolved oxygen, mg/l	STM-C-10.3.0	7.60
<input checked="" type="checkbox"/> 77291	COD mg/l	STM-C-11.2.0	44
<input checked="" type="checkbox"/> 77291	BOD, mg/l	STM-C-10.2.0	6.7
<input type="checkbox"/> 77291	Ammonia as NH <sub>3</sub> -N, mg/l	STM-C-7.2.04	0.14
<input checked="" type="checkbox"/> 77291	Suspended Solids, mg/l	STM-C-2.1.00	18
<input checked="" type="checkbox"/> 77291	Conductivity, uS/cm @ 20°C	STM-C-4.1.00	856
<input checked="" type="checkbox"/> 77291	Nitrates as NO <sub>3</sub> mg/l	STM-C-9.3.08	31.7
<input type="checkbox"/> 77291	Simazine ug/l	Subcontracted	
<input type="checkbox"/> 77291	Xylenes ug/l	Subcontracted	<0.5 <i>0.5</i>
<input type="checkbox"/> 77291	Tributyltin ug/l	Subcontracted	<0.02 <i>&gt; 0.001</i>
<input type="checkbox"/> 77291	Boron as B mg/l	Subcontracted	0.05
<input type="checkbox"/> 77291	Nickel as Ni mg/l	Subcontracted	0.0008

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Wexford  
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Email: info@qlab.ie

### Test Report

Customer: Jennings O'Donovan & Pa  
Consulting Engineers  
Finisklin Business Park  
Sligo  
Co. Sligo

Account.: 9413

Report No.: 51727  
Report Date: 02/12/2009  
Received Date: 11/11/2009  
Analysis Date: 12/11/2009  
Order No.:  
Page: 2 of 2  
Revision Date:

<input type="checkbox"/>	77291	Fluoride as F, mg/l	Subcontracted	<0.1
<input type="checkbox"/>	77291	Phenols, ug/l	Subcontracted	
<input type="checkbox"/>	77291	Cyanide mg/l	Subcontracted	<0.005
<input type="checkbox"/>	77291	Toluene ug/l	Subcontracted	<0.5
<input type="checkbox"/>	77291	Lead as Pb, mg/l	Subcontracted	0.0004
<input type="checkbox"/>	77291	Dichloromethane ug/l	Subcontracted	<5.0
<input type="checkbox"/>	77291	Atrazine ug/l	Subcontracted	
<input type="checkbox"/>	77291	Barium as Ba mg/l	Subcontracted	0.0137
<input type="checkbox"/>	77291	Selenium as Se mg/l	Subcontracted	0.0007
<input type="checkbox"/>	77291	Mercury as Hg mg/l	Subcontracted	<0.00002
<input type="checkbox"/>	77291	Cadmium as Cd mg/l	Subcontracted	<0.0001
<input checked="" type="checkbox"/>	77291	Total Hardness as CaCO <sub>3</sub> , mg/l	STM-C-6.1.00	172
<input type="checkbox"/>	77291	Temperature, °C	STM-C-41.1.0	52

Comments:

Report Authorised By:

Peter O'Byrne

Peter O'Byrne Chem. Lab. Manager

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**Test Report**

**Copy**

Customer: Jennings O'Donovan & Pa  
Consulting Engineers  
Finisklin Business Park  
Sligo  
Co. Sligo

Account.: 9413

Report No.: 51728  
Report Date: 01/12/2009  
Received Date: 11/11/2009  
Analysis Date: 12/11/2009  
Order No.:  
Page: 1 of 2  
Revision Date:

Sample ID: 77292

Description: Upstream Sample taken @ Castletown 11.11.09 10.30hrs by Conor (Q-Lab)

Ref No:

ID	Test	SOP	Results
<input type="checkbox"/> 77292	Total Nitrogen as N, mg/l	STM-C-13.1.0	5.6
<input type="checkbox"/> 77292	Copper as Cu, mg/l	Subcontracted	0.004 <i>ok</i>
<input type="checkbox"/> 77292	Chromium as Cr mg/l	Subcontracted	0.0010 <i>ok</i>
<input type="checkbox"/> 77292	Arsenic as As mg/l	Subcontracted	0.0018 <i>ok</i>
<input type="checkbox"/> 77292	Sulphates as SO <sub>4</sub> , mg/l	STM-C-18.2.0	<2
<input type="checkbox"/> 77292	Ortho Phosphates (as mg P/L)	STM-C-20.2.0	0.26
<input type="checkbox"/> 77292	Total Phosphorous as P, mg/l	STM-C-19.2.0	0.34
<input checked="" type="checkbox"/> 77292	pH value	STM-C-3.1.00	7.66
<input type="checkbox"/> 77292	Nitrites as NO <sub>2</sub> , mg/l	STM-C-8.2.04	1.08
<input type="checkbox"/> 77292	Zinc as Zn mg/l	Subcontracted	0.0121 <i>ok</i>
<input type="checkbox"/> 77292	Dissolved oxygen, mg/l	STM-C-10.3.0	8.10
<input checked="" type="checkbox"/> 77292	COD mg/l	STM-C-11.2.0	13
<input checked="" type="checkbox"/> 77292	BOD, mg/l	STM-C-10.2.0	<0.5
<input type="checkbox"/> 77292	Ammonia as NH <sub>3</sub> -N, mg/l	STM-C-7.2.04	0.90
<input checked="" type="checkbox"/> 77292	Suspended Solids, mg/l	STM-C-2.1.00	3
<input checked="" type="checkbox"/> 77292	Conductivity, uS/cm @ 20°C	STM-C-4.1.00	468
<input checked="" type="checkbox"/> 77292	Nitrates as NO <sub>3</sub> mg/l	STM-C-9.3.08	2.4
<input type="checkbox"/> 77292	Simazine ug/l	Subcontracted	<0.01 <i>ok</i>
<input type="checkbox"/> 77292	Xylenes ug/l	Subcontracted	<0.5 <i>ok</i>
<input type="checkbox"/> 77292	Tributyltin ug/l	Subcontracted	<0.02 <i>7.0.2.1</i>
<input type="checkbox"/> 77292	Boron as B mg/l	Subcontracted	0.03
<input type="checkbox"/> 77292	Nickel as Ni mg/l	Subcontracted	0.0066 <i>ok</i>

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### Test Report Copy

Customer: Jennings O'Donovan & Pa  
Consulting Engineers  
Finisklin Business Park  
Sligo  
Co. Sligo  
Account.: 9413

Report No.: 51728  
Report Date: 01/12/2009  
Received Date: 11/11/2009  
Analysis Date: 12/11/2009  
Order No.:  
Page: 2 of 2  
Revision Date:

<input type="checkbox"/>	77292	Fluoride as F, mg/l	Subcontracted	<0.1
<input type="checkbox"/>	77292	Phenols, ug/l	Subcontracted	<0.5
<input type="checkbox"/>	77292	Cyanide mg/l	Subcontracted	<0.005
<input type="checkbox"/>	77292	Toluene ug/l	Subcontracted	<5.0
<input type="checkbox"/>	77292	Lead as Pb, mg/l	Subcontracted	<0.0003
<input type="checkbox"/>	77292	Dichloromethane ug/l	Subcontracted	<5.0
<input type="checkbox"/>	77292	Atrazine ug/l	Subcontracted	<0.01
<input type="checkbox"/>	77292	Barium as Ba mg/l	Subcontracted	0.0452
<input type="checkbox"/>	77292	Selenium as Se mg/l	Subcontracted	0.0004
<input type="checkbox"/>	77292	Mercury as Hg mg/l	Subcontracted	<0.00002
<input type="checkbox"/>	77292	Cadmium as Cd mg/l	Subcontracted	0.0001
<input checked="" type="checkbox"/>	77292	Total Hardness as CaCO <sub>3</sub> , mg/l	STM-C-6.1.00	266
<input type="checkbox"/>	77292	Temperature, °C	STM-C-41.1.0	7.0

Comments:

Report Authorised By:

Peter O'Byrne

Peter O'Byrne Chem. Lab. Manager

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## **ATTACHMENT F.1**



**Station No:** 0200

**River Code:** 06D01

**Situated On:** [DEE](#)

**Location:** Deegvee Br

**Hydrometric Area:** Newry, Fane, Glyde and Dee

**Chemical Data Available For:**

[2001 to 2003](#)

[1995 to 1997](#)



**Biological Data:**

YEAR	QUALITY
2003	3-4
2000	3-4
1997	3
1994	3
1990	4
1986	4
1983	4
1980	3-4
1978	2-3
1974	3-4
1971	4

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**Station No:** 0200 **Location:** Deegvee Br **Date From:** 1995 **To:** 1997

A value displayed in **BOLD** indicates the value falls outside either an upper or lower threshold and highlights stations where there may be water quality problems.

Parameter	Parameter Units	Minimum	Median	Maximum	No of Samples	Source	Source Type
B.O.D	mg O2l-1	<b>1.6</b>	<b>3.0</b>	<b>5.4</b>	11	Meath Co Co	LA
B.O.D	mg O2l-1	<b>1.8</b>	<b>2.4</b>	<b>4.4</b>	4	Monaghan	EPA
Chloride	mg Cl l-1	<b>12</b>	<b>17</b>	<b>20</b>	11	Meath Co Co	LA
Chloride	mg Cl l-1	<b>16</b>	<b>17</b>	<b>18</b>	4	Monaghan	EPA
Colour	Hazen	<b>10</b>	<b>89</b>	<b>257</b>	11	Meath Co Co	LA
Colour	Hazen	<b>16</b>	<b>36</b>	<b>63</b>	4	Monaghan	EPA
Conductivity	◆ S cm-1	240	394	<b>445</b>	10	Meath Co Co	LA
Conductivity	◆ S cm-1	393	<b>438</b>	516	4	Monaghan	EPA
Ortho-Phosphate	mg P l-1	<b>0.02</b>	<b>0.07</b>	<b>1.73</b>	11	Meath Co Co	LA
Ortho-Phosphate	mg P l-1	<b>0.03</b>	<b>0.04</b>	<b>0.06</b>	4	Monaghan	EPA
Oxidised Nitrogen	mg N l-1	<b>0.7</b>	<b>2.2</b>	<b>3.2</b>	11	Meath Co Co	LA
Oxidised Nitrogen	mg N l-1	<b>0.6</b>	<b>0.7</b>	<b>0.9</b>	8	Monaghan	EPA
pH		<b>7.0</b>	<b>7.8</b>	<b>8.2</b>	11	Meath Co Co	LA
pH		<b>7.8</b>	<b>8.0</b>	<b>8.2</b>	4	Monaghan	EPA
Temperature	oC	<b>2.9</b>	<b>10.2</b>	<b>16.8</b>	11	Meath Co Co	LA
Temperature	oC	<b>15.0</b>	<b>16.5</b>	<b>17.0</b>	4	Monaghan	EPA
Total Ammonia	mg N l-1	<b>0.02</b>	<b>0.05</b>	<b>0.78</b>	11	Meath Co Co	LA
Total Ammonia	mg N l-1	<b>0.01</b>	<b>0.03</b>	<b>0.06</b>	4	Monaghan	EPA

**Station No:** 0200 **Location:** Deegvee Br **Date From:** 2001 **To:** 2003

A value displayed in **BOLD** indicates the value falls outside either an upper or lower threshold and highlights stations where there may be water quality problems.

Parameter	Parameter Units	Minimum	Median	Maximum	No of Samples	Source	Source Type
B.O.D	mg O21-1	<1.0	2.0	5.8	16	Meath Co Co	LA
B.O.D	mg O21-1	1.5	1.8	2.4	3	Monaghan	EPA
Chloride	mg Cl 1-1	11	16	19	16	Meath Co Co	LA
Chloride	mg Cl 1-1	12	12	15	3	Monaghan	EPA
Colour	Hazen	21	34	300	16	Meath Co Co	LA
Colour	Hazen	33	52	61	3	Monaghan	EPA
Ortho-Phosphate	mg P 1-1	0.02	0.05	0.11	16	Meath Co Co	LA
Ortho-Phosphate	mg P 1-1	0.02	0.03	0.03	3	Monaghan	EPA
Oxidised Nitrogen	mg N 1-1	0.6	1.3	2.2	16	Meath Co Co	LA
Oxidised Nitrogen	mg N 1-1	0.4	1.0	1.4	3	Monaghan	EPA
pH		7.5	7.7	8.0	15	Meath Co Co	LA
pH		7.7	7.8	8.0	3	Monaghan	EPA
Temperature	oC	4.1	12.3	18.4	16	Meath Co Co	LA
Temperature	oC	13.0	16.0	17.0	3	Monaghan	EPA
Total Ammonia	mg N 1-1	0.00	0.07	0.15	16	Meath Co Co	LA
Total Ammonia	mg N 1-1	0.03	0.04	0.06	3	Monaghan	EPA



**Station No:** 0360

**River Code:** 06D01

**Situated On:** [DEE](#)

**Location:** Br SE of Rockfield Ho

**Hydrometric Area:** Newry, Fane, Glyde and Dee

**Chemical Data Available For:**

[2001 to 2003](#)

[1995 to 1997](#)



**Biological Data:**

YEAR	QUALITY
2003	4
2000	4
1997	3-4
1994	3-4
1990	4

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---

**Station No:** 0360 **Location:** Br SE of Rockfield Ho **Date From:** 2001 **To:** 2003

A value displayed in **BOLD** indicates the value falls outside either an upper or lower threshold and highlights stations where there may be water quality problems.

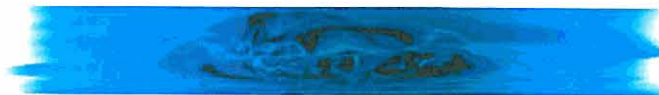
Parameter	Parameter Units	Minimum	Median	Maximum	No of Samples	Source	Source Type
B.O.D	mg O2l-1	<1.0	1.9	6.1	16	Meath Co Co	LA
Chloride	mg Cl l-1	12	17	23	16	Meath Co Co	LA
Colour	Hazen	17	32	300	16	Meath Co Co	LA
Ortho-Phosphate	mg P l-1	0.02	0.05	0.11	16	Meath Co Co	LA
Oxidised Nitrogen	mg N l-1	1.3	1.7	2.6	16	Meath Co Co	LA
pH		7.7	7.8	8.2	15	Meath Co Co	LA
Temperature	oC	4.1	12.4	18.0	16	Meath Co Co	LA
Total Ammonia	mg N l-1	0.02	0.05	0.23	16	Meath Co Co	LA

**Station No:** 0360 **Location:** Br SE of Rockfield Ho **Date From:** 1995 **To:** 1997

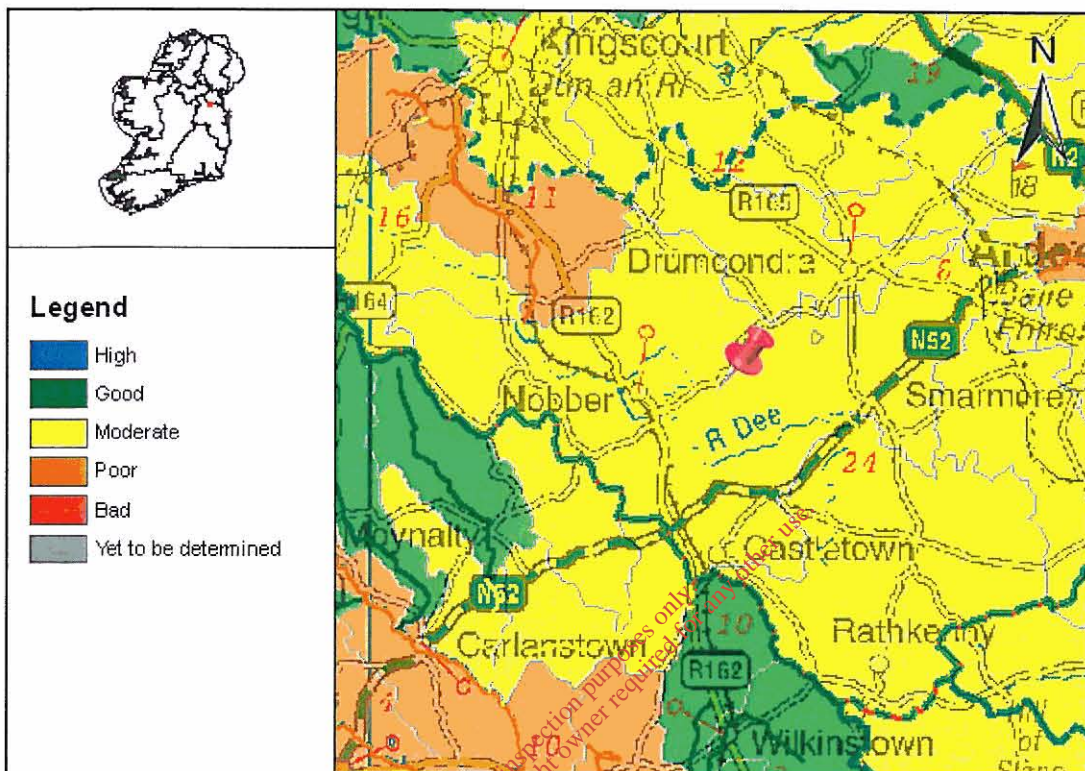
A value displayed in **BOLD** indicates the value falls outside either an upper or lower threshold and highlights stations where there may be water quality problems.

Parameter	Parameter Units	Minimum	Median	Maximum	No of Samples	Source	Source Type
B.O.D	mg O2l-1	<b>1.1</b>	<b>2.8</b>	<b>6.3</b>	11	Meath Co Co	LA
Chloride	mg Cl l-1	<b>12</b>	<b>19</b>	<b>22</b>	11	Meath Co Co	LA
Colour	Hazen	<b>10</b>	<b>73</b>	<b>243</b>	11	Meath Co Co	LA
Conductivity	µS cm-1	300	457	515	10	Meath Co Co	LA
Ortho-Phosphate	mg P l-1	<b>0.02</b>	<b>0.08</b>	<b>0.25</b>	11	Meath Co Co	LA
Oxidised Nitrogen	mg N l-1	<b>1.4</b>	<b>2.8</b>	<b>4.2</b>	11	Meath Co Co	LA
pH		<b>7.0</b>	<b>7.8</b>	<b>8.3</b>	11	Meath Co Co	LA
Temperature	oC	<b>3.1</b>	<b>10.0</b>	<b>16.7</b>	11	Meath Co Co	LA
Total Ammonia	mg N l-1	<b>0.02</b>	<b>0.06</b>	<b>0.58</b>	11	Meath Co Co	LA





## Full Report for Waterbody Dee



Date Reported to Europe: 22/12/2008

Date Report Created 11/11/2009



**Summary Information:**

**WaterBody Category:** Subbasin Waterbody

**WaterBody Name:** Dee

**WaterBody Code:** IE\_NB\_06\_50

**Overall Status:** Moderate

**Overall Objective:** Restore

**Overall Risk:** 1a At Risk

**Applicable Supplementary Measures:** Unsewered; Urban & Industrial; Morphology; Forestry;  
Report data based upon Draft RBMP, 22/12/2008.



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Date Reported to Europe: 22/12/2008

Date Report Created 11/11/2009



## Status Report

**WaterBody Category:** Subbasin Waterbody

**WaterBody Name:** Dee

**WaterBody Code:** IE\_NB\_06\_50

**Overall Status Result:** Moderate



Status Element Description		Result
EX	Status from Monitored or Extrapolated Waterbody	
<b>Biological Elements</b>		
Q	Macroinvertebrates (Q-Value)	Moderate
F	Fish	n/a
DI	Phytobenthos (Diatoms)	n/a
FPM	Status value as determined by Margartifera	n/a
<b>Supporting Elements</b>		
MOR	Hydromorphology	n/a
SP	Specific Pollutants	n/a
PC	General Physico-Chemical	Fail
<b>Chemical Status</b>		
PAS	Chemical Status	n/a
<b>Overall Ecological Status</b>		
O	Overall Ecological Status	Moderate

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Date Reported to Europe: 22/12/2008

Date Report Created 11/11/2009





## Risk Report

**WaterBody Category:** Subbasin Waterbody

**WaterBody Name:** Dee

**WaterBody Code:** IE\_NB\_06\_50

**Overall Risk Result:** **1a** At Risk



Risk Test Description		Risk
<b>Point Risk Sources</b>		
RP1	WWTPs (2008)	<b>1a</b> At Risk
RP2	CSOs	<b>2b</b> Not At Risk
RP3	IPPCs (2008)	<b>2b</b> Not At Risk
RP4	Section 4s (2008)	<b>2b</b> Not At Risk
RPO	Overall Risk from Point Sources - Worst Case (2008)	<b>1a</b> At Risk
<b>Diffuse Risk Sources</b>		
RD1	EPA diffuse model (2008)	<b>1b</b> Probably At Risk
RD2a	Road Wash - Soluble Copper	<b>2b</b> Not At Risk
RD2b	Road Wash - Total Zinc	<b>2b</b> Not At Risk
RD2c	Road Wash - Total Hydrocarbons	<b>2b</b> Not At Risk
RD3	Railways	<b>2b</b> Not At Risk
RD4a	Forestry - Acidification (2008)	<b>2b</b> Not At Risk
RD4b	Forestry - Suspended Solids (2008)	<b>2b</b> Not At Risk
RD4c	Forestry - Eutrophication (2008)	<b>2a</b> Probably Not At Risk
RD5a	Unsewered Areas - Pathogens (2008)	<b>2a</b> Probably Not At Risk
RD5b	Unsewered Phosphorus (2008)	<b>2b</b> Not At Risk
RD5	Overall Unsewered (2008)	<b>2b</b> Not At Risk
RD6a	Arable	<b>2b</b> Not At Risk
RD6b	Sheep Dip	<b>2b</b> Not At Risk
RD6c	Forestry - Dangerous Substances	<b>2b</b> Not At Risk
RDO	Diffuse Overall -Worst Case (2008)	<b>1b</b> Probably At Risk

Date Reported to Europe: 22/12/2008

Date Report Created 11/11/2009



<b>Morphological Risk Sources</b>		
RM1	Channelisation (2008)	1a At Risk
RM2	Embankments (2008)	2b Not At Risk
RM3	Impoundments	2b Not At Risk
RM4	Water Regulation	2b Not At Risk
RMO	Morphology Overall - Worst Case (2008)	1a At Risk
<b>Q/RDI or Point/Diffuse</b>		
QPD	Q class/EPA Diffuse Model or worst case of Point and Diffuse (2008)	1a At Risk
<b>Hydrology</b>		
RHY1	Water balance - Abstraction	2a Probably Not At Risk
<b>Overall Risk</b>		
RA	Rivers Overall - Worst Case (2008)	1a At Risk

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Date Reported to Europe: 22/12/2008

Date Report Created 11/11/2009



## Objectives Report

**WaterBody Category:** Subbasin Waterbody

**WaterBody Name:** Dee

**WaterBody Code:** IE\_NB\_06\_50

**Overall Objective:** Restore



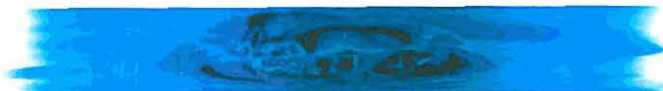
Objectives Description		Result
<b>Objectives</b>		
OB1	Objective 1 - Protected Areas	Restore
OB2	Objective 2 - Protect High and Good Status	Not Applicable
OB3	Objective 3 - Restore Less Than Good Status	Not Applicable
OB4	Objective 4 - Reduce Chemical Pollution	Not Applicable
OBO	Overall Objective	Restore
<b>Deadline</b>		
YR	Default Year by which the objective must be met	2015
EX	Revised Objective Deadline	2015
OBO	Overall Objective and Deadline	Restore - 2015

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Date Reported to Europe: 22/12/2008

Date Report Created 11/11/2009





## Basic Measures Report

**WaterBody Category:** Subbasin Waterbody

**WaterBody Name:** Dee

**WaterBody Code:** IE\_NB\_06\_50



Basic Measures Description		Applicable
<b>Key Directives</b>		
BA	Bathing Waters Directive	No
BI	Birds Directive	No
HA	Habitats Directive	No
DW	Drinking Waters Directive	Yes
SEV	Major Accidents and Emergencies (Seveso) Directive	Yes
EIA	Environmental Impact Assessment Directive	Yes
SE	Sewage Sludge Directive	Yes
UW	Urban Waste Water Treatment Directive	Yes
PL	Plant Protection Products Directive	Yes
NI	Nitrates Directive	Yes
IP	Integrated Pollution Prevention Control Directive	Yes
<b>Other Stipulated Measures</b>		
CR	Cost recovery for water use	Yes
SU	Promotion of efficient and sustainable water use	Yes
DWS	Protection of drinking water sources	Yes
AB	Control of abstraction and impoundments	Yes
PT	Control of point source discharges	Yes
DI	Control of diffuse source discharges	Yes
GWD	Authorisation of discharges to groundwater	No
PS	Control of priority substances	Yes
MOR	Control of physical modifications to surface waters	Yes
OA	Controls on other activities impacting on water status	Yes
AP	Prevention or reduction of the impact of accidental pollution incidents	Yes

Date Reported to Europe: 22/12/2008

Date Report Created 11/11/2009



## Urban and Industrial Discharges Supplementary Measures Report

**WaterBody Category:** Subbasin Waterbody

**WaterBody Name:** Dee

**WaterBody Code:** IE\_NB\_06\_50



	<b>Point discharges to waters from municipal and industrial sources</b>	<b>Result</b>
PINDDIS	Is there one or more industrial discharge (Section 4 licence issued by the local authority or IPPC licence issued by the EPA) contained within the water body?	Yes
PINDDISR	Are there industrial discharges (Section 4 licence issued by the local authority or IPPC licence issued by the EPA) that cause the receiving water to be 'At Risk' within the water body?	No
PB1	Basic Measure 1 - Measures for improved management.	Yes
PB2	Basic Measure 2 - Optimise the performance of the waste water treatment plant by the implementation of a performance management system.	No
PB3	Basic Measure 3 - Revise existing Section 4 license conditions and reduce allowable pollution load.	No
PB4	Basic Measure 4 - Review existing IPPC license conditions and reduce allowable pollution load.	No
PB5	Basic Measure 5 - Investigate contributions to the collection system from unlicensed discharges.	Yes
PB6	Basic Measure 6 - Investigate contributions to the collection system of specific substances known to impact ecological status.	Yes
PB7	Basic Measure 7 - Upgrade WWTP to increase capacity.	Yes
PB8	Basic Measure 8 - Upgrade WWTP to provide nutrient removal treatment.	No
PS1	Supplementary Measure 1 - Measures intended to reduce loading to the treatment plant.	Yes
PS2	Supplementary Measure 2 - Impose development controls where there is, or is likely to be in the future, insufficient capacity at treatment plants.	Yes
PS3	Supplementary Measure 3 - Initiate investigations into characteristics of treated wastewater for parameters not presently required to be monitored under the urban wastewater treatment directive.	No
PS4	Supplementary Measure 4 - Initiate research to verify risk assessment results and determine the impact of the discharge.	No
PS5	Supplementary Measure 5 - Use decision making tools in point source discharge management.	No
PS6	Supplementary Measure 6 - Install secondary treatment at plants where this level of treatment is not required under the urban wastewater treatment directive.	No
PS7	Supplementary Measure 7 - Apply a higher standard of treatment (stricter emission controls) where necessary.	No

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Date Report Created 11/11/2009

## water matters

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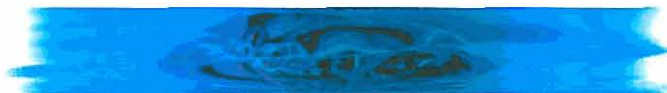
PS8	Supplementary Measure 8 - Upgrade the plant to remove specific substances known to impact on water quality status.	No
PS9	Supplementary Measure 9 - Install ultra-violet or similar type treatment.	No
PS10	Supplementary Measure 10 - Relocate the point of discharge.	No

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## Physical Modifications Supplementary Measures Report

**WaterBody Category:** Subbasin Waterbody

**WaterBody Name:** Dee

**WaterBody Code:** IE\_NB\_06\_50



	Physical Modifications Supplementary Measures	Applicable
	<b>Reduce</b>	
SM1	Codes of Practice	Yes
SM2	Support for voluntary initiatives	Yes
	<b>Remediate</b>	
SM3	Channelisation impact remediation schemes	No
SM4	Channelisation investigation	Yes
SM5	Overgrazing remediation	No
SM6	Impassable barriers, impact confirmed, investigation into feasibility of remediation required	No
SM7	Impassable barriers investigation	Yes

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## Unsewered Properties Supplementary Measures Report

**WaterBody Category:** Subbasin Waterbody

**WaterBody Name:** Dee

**WaterBody Code:** IE\_NB\_06\_50



Supplementary Measures for Unsewered Properties		Applicable
SP1	Amend building regulations	Yes
SP2	Establish certified expert panels for site investigation and certification of installed systems	Yes
SP3	Assess applications for new unsewered systems by applying risk mapping/decision support systems and codes of practice	Yes
SP4	Carry out an inspection programme in prioritised locations for existing systems and record results in an action tracking system	No
SP5	Enforce requirements for percolation	No
SP6	Enforce requirements for de-sludging	Yes
SP7	Consider connection to municipal systems	No

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## Forestry Measures Report

**WaterBody Category:** Subbasin Waterbody

**WaterBody Name:** Dee

**WaterBody Code:** IE\_NB\_06\_50



	Forestry Measures for	Applicable
	Forestry	
SF1	Management Instruments - Ensure regulations and guidance are cross referenced and revised to incorporate proposed measures	No
SF2	Acidification - Avoid or limit afforestation on 1st and 2nd order stream catchments in acid sensitive areas	No
SF3	Acidification - Revise the Acidification Protocol to ensure actual minimum alkalinities are detected and revise boundary conditions for afforestation in acid sensitive areas	No
SF10	Pesticide Use - Pre-dip trees in nurseries prior to planting out	No
SF11	Pesticide Use - Maintain registers of pesticide use	No
SF12	Acidification - Restructure existing forests to include open space and structural diversity through age classes and species mix, including broadleaves	No
SF13	Acidification - Mitigate acid impacts symptomatically using basic material	No
SF14	Acidification - Manage catchment drainage to increase residence times and soil wetting	No
SF15	Acidification - Implement measures to increase stream production.	No
SF16	Eutrophication - Establish riparian zone management prior to clearfelling	No
SF17	Eutrophication and Sedimentation - Enhance sediment control	No
SF18	Eutrophication - Manage catchment drainage to increase residence times and soil wetting, including no drainage in some locations	No
SF19	Sedimentation - Establish riparian zone management prior to clearfelling	No
SF20	Sedimentation - Enhance sediment control	No
SF21	Sedimentation - Manage catchment drainage to increase residence times and soil wetting, including no drainage in some locations	No
SF22	Hydromorphology - Enhance drainage network management, minimise drainage in peat soils	No
SF23	Pesticide Use - Develop biological control methods	No

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SF4	Eutrophication and Sedimentation - Avoid or limit forest cover on peat sites	No
SF5	Eutrophication and Sedimentation - Change the tree species mix on replanting	No
SF6	Eutrophication and Sedimentation - Limiting felling coup size	No
SF7	Eutrophication and Sedimentation - Establish new forest structures on older plantation sites	No
SF8	Hydromorphology - Audit existing drainage networks in forest catchments	No
SF9	Pesticide Use - Reduce pesticide usage	No

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SampleCode	EPA_Site_Cor	SampleDate	Sample	DO_Sat_(%Sat)	DO_(mg/L)	Temperature	pH_Units	Conductivity_(uS)	BOD ( mg/L )	Suspended_solid_(mgN/L)
07990092	06D010200	18/01/2007	Grab	92.5	10.91	6.6	7.77	240		0.112
07990222	06D010200	26/02/2007	Grab	88.7	10.69	7.2	7.96	321		0.055
07990300	06D010200	15/03/2007	Grab	88.6	10.52	8	7.99	329	1.23	0.035
07990429	06D010200	18/04/2007	Grab	106.7	11.41	12	8.11	477		0.018
07990575	06D010200	16/05/2007	Grab	71.8	7.61	12.6	8	477	1.65	0.127
07990715	06D010200	28/06/2007	Grab	88.4	8.93	14.3	7.96	391		0.025
07990755	06D010200	18/07/2007	Grab	88.8	8.52	17.2	7.89	304		0.012
07990849	06D010200	21/08/2007	Grab	75.4	7.56	15.6	7.77	303	2.69	0.112
07991002	06D010200	25/09/2007	Grab	77.4	8.16	13.1	7.88	458		0.074
07991147	06D010200	25/10/2007	Grab	67.8	8.21	7.3	7.82	506		0.114
07991291	06D010200	28/11/2007	Grab	77	8.87	8.7	7.83	379	1.85	0.161
07991364	06D010200	12/12/2007	Grab	81.8	9.87	7.7	7.8	281		0.111
08990038	06D010200	28/01/2008	Grab	83.8	10.11	7.6	7.75	342		0.126
08990126	06D010200	20/02/2008	Grab	85.6	10.7	5.8	7.87	422	1.11	0.103
08990253	06D010200	22/04/2008	Grab	104	11.59	10.2	8.11	425		0.050
08990432	06D010200	28/05/2008	Grab	73.6	7.57	13.4	7.73	486	2.71	0.046
08990487	06D010200	15/07/2008	Grab	94.5	8.97	18.3	7.92	432		0.047
08990605	06D010200	13/08/2008	Grab	62.7	6.14	15.3	7.48	239	3.13	0.159
08990750	06D010200	18/11/2008	Grab	84.2	9.90	8.6	7.59	320	1.15	0.078
09990019	06D010200	10/02/2009	Grab	87.2	11.48	5.5	7.88	352	0.96	0.061
07990093	06D010360	18/01/2007	Grab	92.6	10.97	6.3	7.78	236		0.204
07990223	06D010360	26/02/2007	Grab	92.2	11.15	7.2	8.02	392		0.032
07990301	06D010360	15/03/2007	Grab	91	10.85	8.1	7.98	411	1.79	0.107
07990430	06D010360	18/04/2007	Grab	114.5	12.63	10.8	8.32	552		0.005
07990576	06D010360	16/05/2007	Grab	99.9	10.65	12.3	8.27	546	1.47	0.014
07990716	06D010360	28/06/2007	Grab	99.3	10.2	13.6	8.13	439		0.016
07990756	06D010360	18/07/2007	Grab	94.6	9.41	16.9	8.01	353		0.015
07990850	06D010360	21/08/2007	Grab	87.4	8.89	15.1	7.88	378	2.22	0.046
07991003	06D010360	25/09/2007	Grab	102.1	10.88	12.6	8.21	543		0.010
07991148	06D010360	25/10/2007	Grab	86.5	10.75	6.4	8.08	602		0.016
07991292	06D010360	28/11/2007	Grab	88.1	10.05	9.1	8.02	437	1.66	0.073
07991365	06D010360	12/12/2007	Grab	85.7	10.29	7.9	7.87	360		0.225
08990039	06D010360	28/01/2008	Grab	88.7	10.72	7.6	7.88	434		0.103
08990127	06D010360	20/02/2008	Grab	91.4	11.53	5.6	8.07	510	1.04	0.047
08990254	06D010360	22/04/2008	Grab	107.3	11.98	10.2	8.26	507		0.006
08990433	06D010360	28/05/2008	Grab	96.8	10.14	12.8	8.16	567	1.52	0.028
08990488	06D010360	15/07/2008	Grab	108.9	10.46	17.8	8.22	504		0.016
08990606	06D010360	13/08/2008	Grab	68.9	6.77	14.9	7.65	290	3.25	0.133
08990751	06D010360	18/11/2008	Grab	89.4	10.46	8.8	7.82	390	1.13	0.049
09990020	06D010360	10/02/2009	Grab	91.4	11.95	4.0	7.87	453	0.73	0.044

MRP_(mgP/ TON_(mgN/L), NO2_(mgN/L)	Chloride_(mgCl/L)	Alkalinity_(mg Total Hardne	Colour_ Cu_(m	Zn_(mg/L)
0.066	1.78	0.055	104	
0.023	1.98	0.023		41
0.016	1.95	0.016	12.4	134 150 32
0.006	1.64	0.016		
0.013	1.20	0.036	15.3	236 232 11
0.012	0.79	0.025		
0.014	0.66	0.022		
0.035	0.98	0.045	10.9	128 134 64
0.032	1.05	0.036		
0.034	1.00	0.029		
0.027	1.22	0.034	15.5	152 172 33
0.053	2.02	0.031		
0.037	2.32	0.026		
0.024	2.26	0.018	14.6	170 196 29
0.006	1.29	0.015		
0.013	0.86	0.029	14.7	204 232 17
0.017	0.66	0.030		
0.079	0.79	0.043	11.2	97 104 101
0.031	1.26	0.019	11.9	132 142 45
0.019	1.71	0.013	13.5	142 160 33
0.151	1.62	0.116		88 104 39
0.024	2.56	0.022		
0.039	2.67	0.021	14.9	170 192 31
0.007	2.67	0.015		
0.012	2.03	0.025	17.7	256 268 12
0.026	1.21	0.022		
0.023	0.88	0.018		
0.041	1.44	0.044	12.6	164 174 62
0.043	1.82	0.014		
0.039	1.91	0.017		
0.036	1.56	0.035	17.2	176 200 33
0.053	2.52	0.037		
0.038	3.08	0.029		
0.026	3.07	0.018	16.4	212 248 20
0.007	2.01	0.014		
0.019	1.69	0.026	18.4	244 272 17
0.036	1.26	0.023		
0.091	1.04	0.046	12.5	120 130 102
0.034	1.55	0.020	13.4	166 180 45
0.022	2.27	0.014	16.0	192 212 28

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## **ATTACHMENT F.2**

