



comhairle chontae na mí  
meath county council

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# Ballivor Waste Water Works



## **Annual Environmental Report** for **EPA Waste Water Discharge Licence D0254-01**

**08/11/2010 to 31/12/2010**

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***SECTION 1***  
**Introduction**

## **SECTION 1.1: INTRODUCTION**

Agglomeration: Ballivor Waste Water Works

Licence No: D0254-01

Ballivor Waste Water Treatment Plant (WwTP) was upgraded and subsequently commissioned in 2005. The waste water treatment plant is operated and maintained by Meath County Council. The waste water treatment plant was built to serve the agglomeration of Ballivor Co. Meath and has a design capacity of 2,000 p.e

Ballivor WwTP includes screening, grit removal, two extended aeration basins, one anoxic chamber, ferric dosing for phosphate removal, four clarifiers, a sand filter, sludge thickening and dewatering facilities and a storm water tank. The primary discharge is to a tributary of the Stonyford River (referred to as the Ballivor River), where the confluence of the tributary and the river is 2km downstream of this discharge.

The following Annual Environmental Report (AER) has been prepared as per Condition 6.10 of Meath County Council's Discharge Licence D0254-01 and includes all information requested under schedule D of this licence.

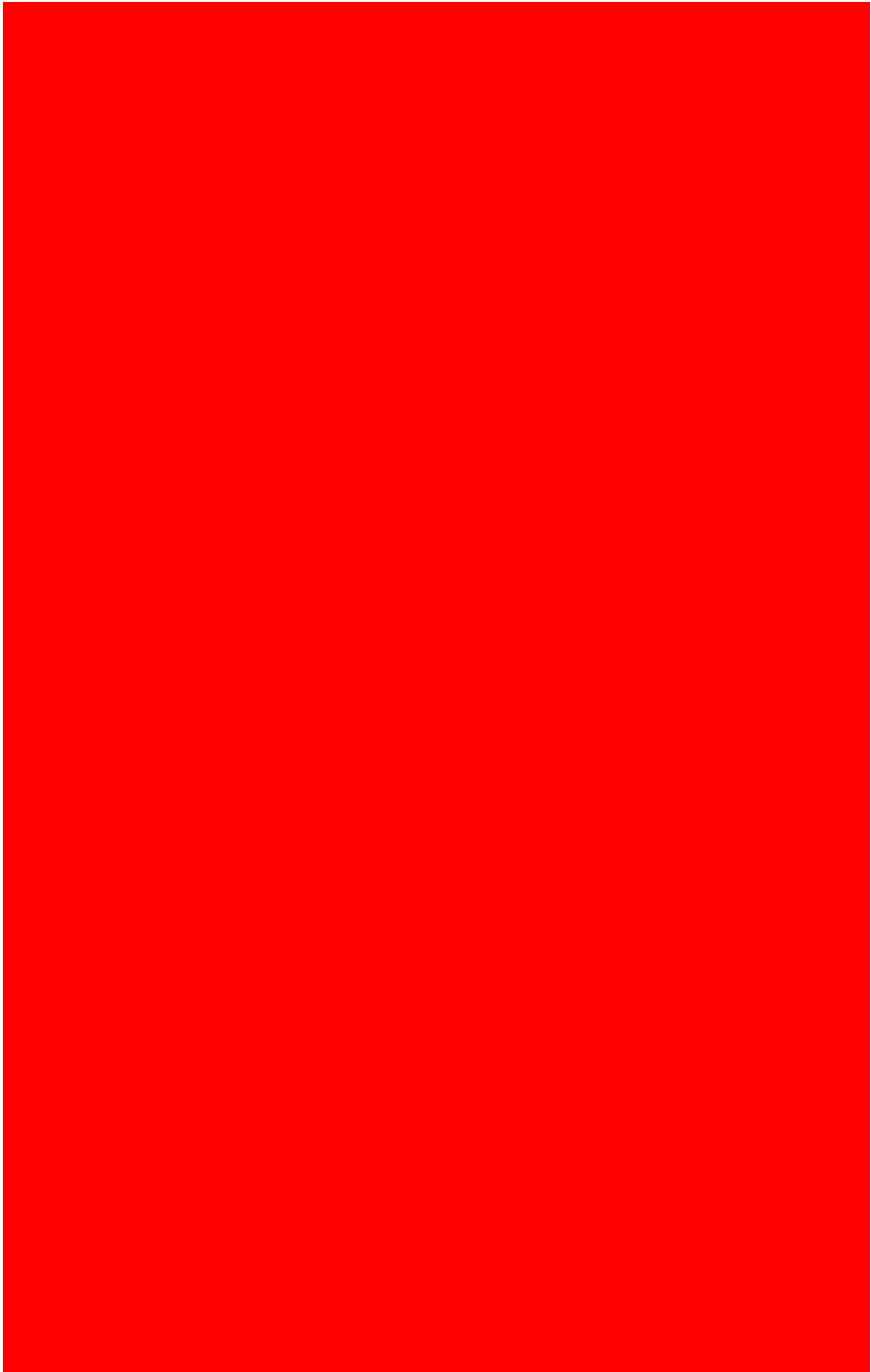
## ***SECTION 2***

# **Monitoring Results**

## **SECTION 2.1: FLOW REPORT.**

### **Final Effluent Flow Meter**

There is no final effluent flow meter at Ballivor WwTP. So for the purpose of AER and future PRTR calculations, Meath County Council, taking into account losses through sludge wasting, dewatering etc has estimated the daily final effluent flow to be 95% of the total daily influent flow recorded at the plant. See SECTION 2.2: INFLUENT AND EFFLUENT FLOW REPORT.



***Meath County Council***  
**EPA Waste Water Discharge Licensing**

Title:: Influent and Effluent Flows  
Treatment Plant: Ballivor WwTP  
Date Licensed: 08/11/2010  
Reporting Period: 08/11/10 to 31/12/10

Date	Influent (m3/d)	Estimated Final Effluent (m3/d)
08/11/2010	754	716
09/11/2010	826	785
10/11/2010	713	677
11/11/2010	894	849
12/11/2010	769	731
13/11/2010	803	763
14/11/2010	824	783
15/11/2010	782	743
16/11/2010	823	782
17/11/2010	377	358
18/11/2010	745	708
19/11/2010	780	741
20/11/2010	803	763
21/11/2010	860	817
22/11/2010	207	197
23/11/2010	1,012	961
24/11/2010	300	285
25/11/2010	599	569
26/11/2010	879	835
27/11/2010	604	574
28/11/2010	556	528
29/11/2010	430	409
30/11/2010	506	481
01/12/2010	502	477
02/12/2010	491	466
03/12/2010	575	546
04/12/2010	134	127
05/12/2010	588	559
06/12/2010	660	627
07/12/2010	375	356
08/12/2010	533	506
09/12/2010	594	564



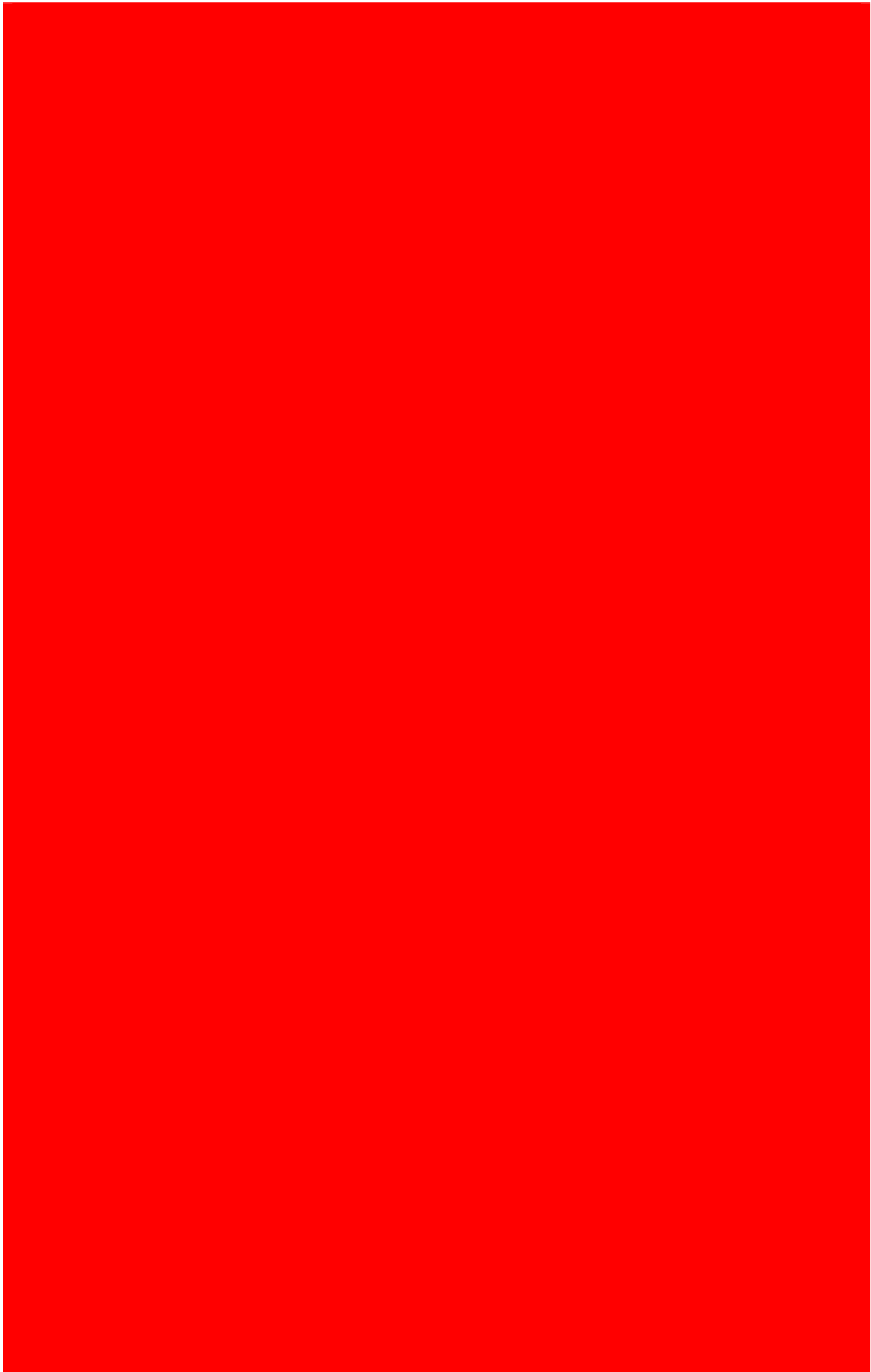
**Meath County Council**  
**EPA Waste Water Discharge Licensing**

Title:: Influent and Effluent Flows  
Treatment Plant: Ballivor WwTP  
Date Licensed: 08/11/2010  
Reporting Period: 08/11/10 to 31/12/10

Date	Influent (m3/d)	Estimated Final Effluent (m3/d)
10/12/2010	531	504
11/12/2010	734	697
12/12/2010	540	513
13/12/2010	499	474
14/12/2010	872	828
15/12/2010	905	860
16/12/2010	659	626
17/12/2010	638	606
18/12/2010	684	650
19/12/2010	642	610
20/12/2010	601	571
21/12/2010	537	510
22/12/2010	578	549
23/12/2010	515	489
24/12/2010	498	473
25/12/2010	519	493
26/12/2010	478	454
27/12/2010	782	743
28/12/2010	632	600
29/12/2010	956	908
30/12/2010	818	777
31/12/2010	554	526

**Calculations:**

	<u>Influent</u>	<u>Effluent</u>
Average Flow (m3/d):	638	606
Number of days recorded:	54	54
Annual Mass Flow (Total m3 for 365 days):	232,992	221,342
Storm Overflow (Estimate: 10% of Annual Mass Flow):	23,299	



Section 2.3 Influent and Effluent Monitoring Report.

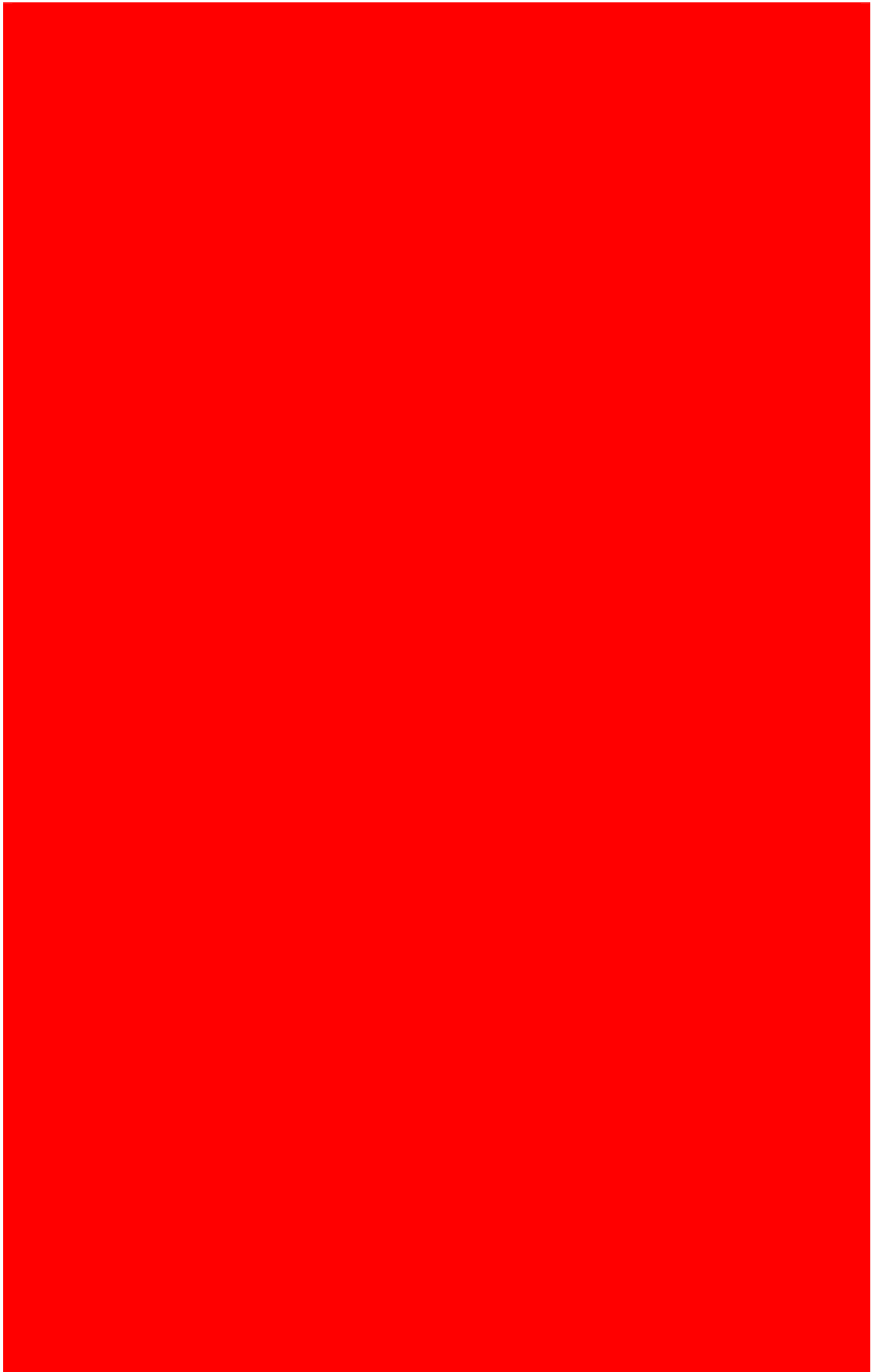
## Meath County Council

### EPA Waste Water Discharge Licensing

Reporting Period: 01/01/10 to 31/12/10  
 Treatment Plant: Ballivor WwTP  
 Type of Analysis: Licence Monitoring  
 Licence Status: Granted 08/11/2010

Elevated Influent Result
  Full Compliance (Note 1)
  Non reportable ELV Exceedance (Note 2)
  Reportable ELV Exceedance (Note 3)

Date	INFLUENT (mg/l)							EFFLUENT (mg/l)										(kg/d)		Comments	Ref:	
	m3/d	BOD	COD	SS	TP	TN	p.e	m3/d	BOD	COD	SS	TP	OP	TN	NH4	NO3	NO2	TON	BOD			TP
30/11/2010	506	228	650	232	7	48	1,923	481	12.3	45.9	9.2	1.3	0.98	20.0	0.13				5.9	0.6	Note 3	10,010
15/12/2010	905	154	288	86	6	40	2,323	860	24.0	33.8	6.8	1.2	0.90	13.2	4.79				20.7	1.0	Note 3	10,010
Average:	706	191	469	159	6	44	2,123	671	18	40	8	1.3	0.9	17	2				13.3	0.8		
Sum:	1,411	382	938	318	13	88		1,341	36	80	16	3	2	33	5				27	2		
ELV - Non-reportable incident limits.									5	125	35		0.5		1							
ELV - Reportable incident limits.									10	250	88		0.6		1							



Section 2.4 Mass Loading - PRTR Calculations (Final Effluent).

**Meath County Council**  
**EPA Waste Water Discharge Licensing**

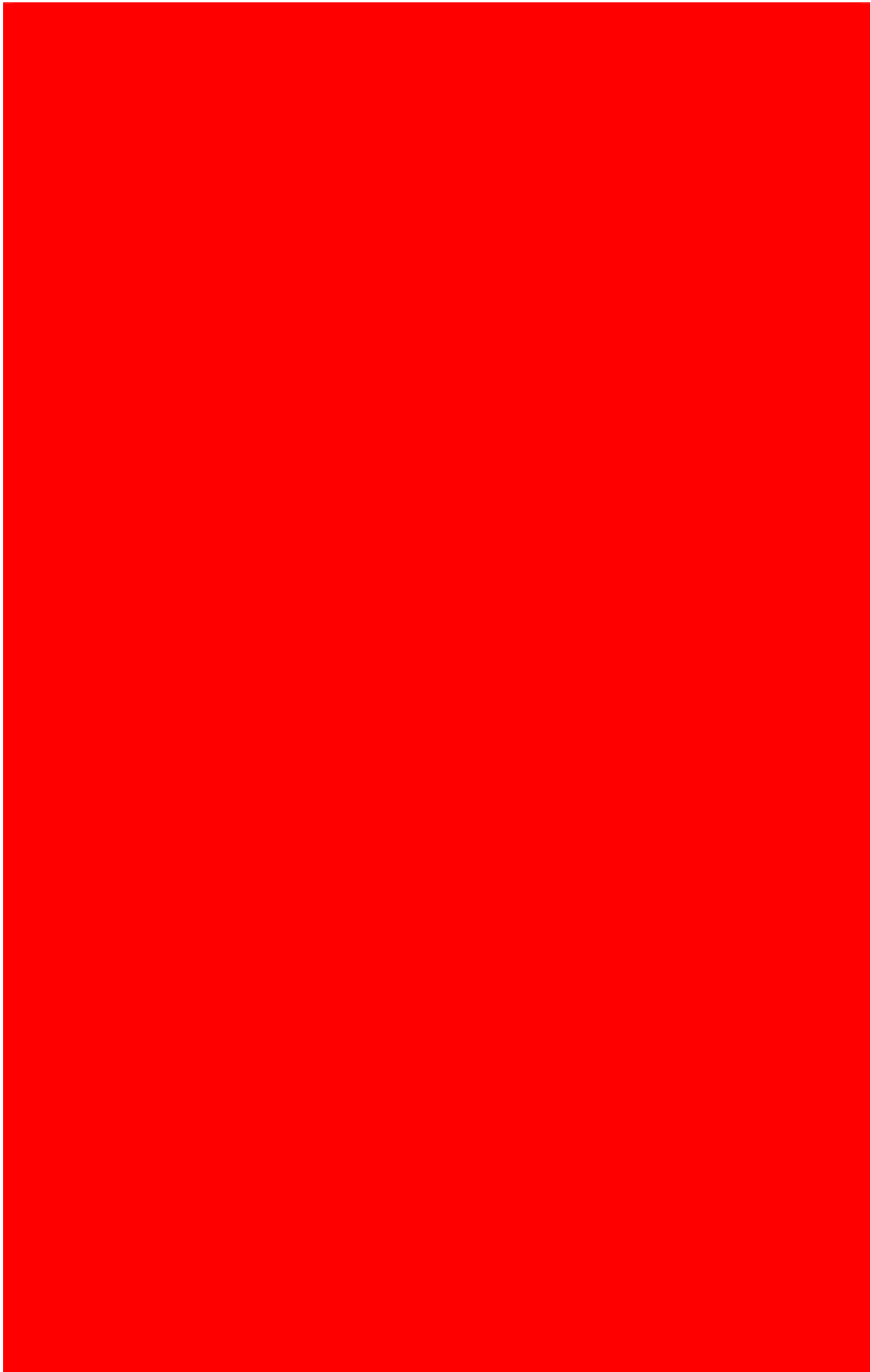
Reporting Period: 01/01/10 to 31/12/10  
Treatment Plant: Ballivor WwTP  
Type of Analysis: Licence Monitoring  
Licence Status: Granted 08/11/2010

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**Calculations:**

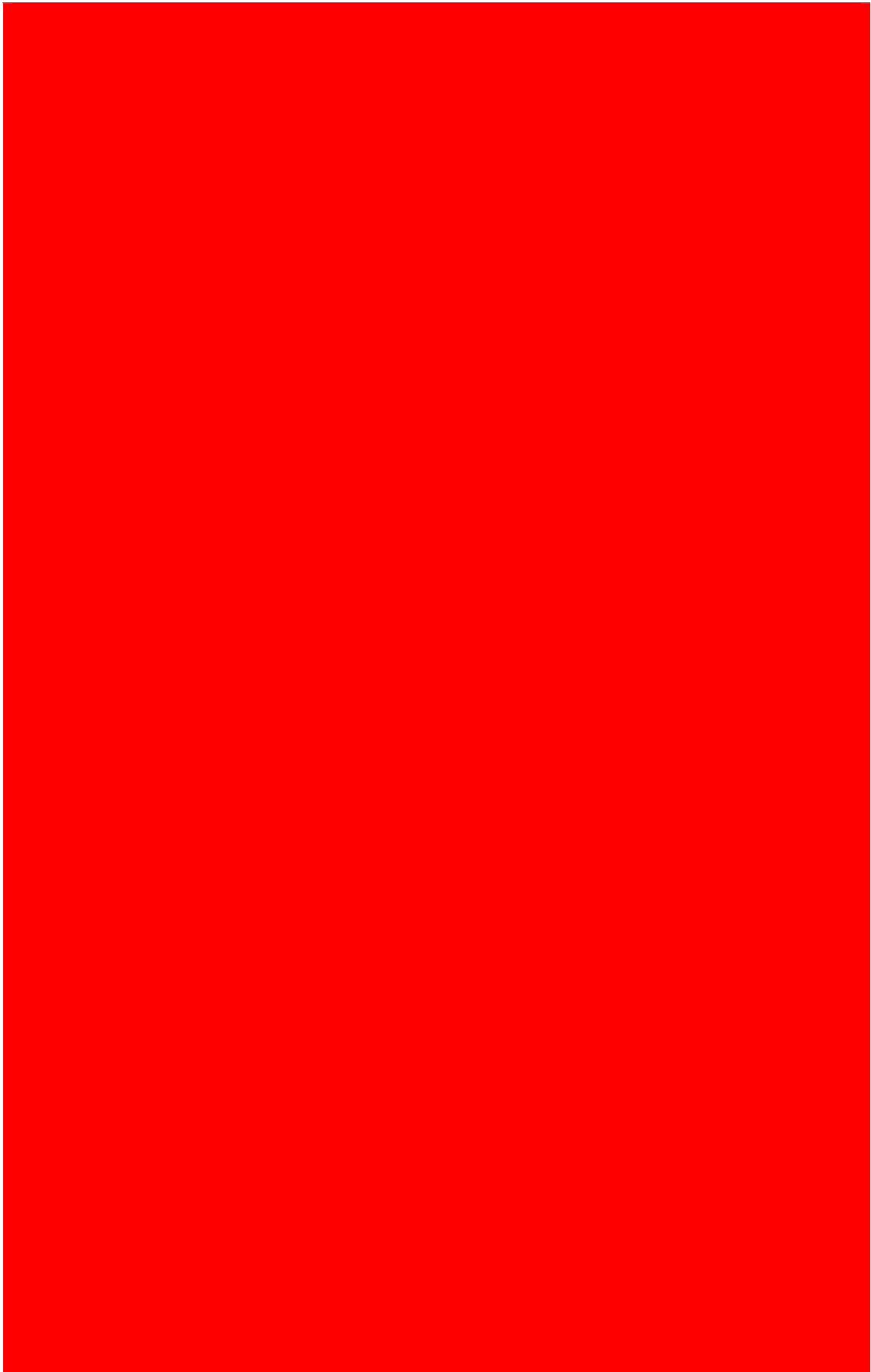
A. Average effluent flows (m3/d) (INFLUENT AND EFFLUENT FLOW REPORT, SECTION 2.2): 606  
B. Total annual mass effluent flow (m3/annum) (INFLUENT AND EFFLUENT FLOW REPORT, SECTION 2.2): 221,342  
C. Sum of daily effluent flows on the sampling dates (m3): 1,341

	<b><u>BOD</u></b>	<b><u>COD</u></b>	<b><u>TSS</u></b>	<b><u>TP</u></b>	<b><u>OrthoP</u></b>	<b><u>TN</u></b>	<b><u>NH4</u></b>	<b><u>Nitrate</u></b>	<b><u>Nitrite</u></b>
D. Average daily effluent load (mg/l):	18.2	39.9	8.0	1.3	0.9	16.6	2.5		
E. Sum of daily effluent loads (mg/l)	36.3	79.7	16.0	2.5	1.9	33.2	4.9		
F. Sum of daily effluent mass loads (kg/day)	22.0	48.3	9.7	1.5	1.1	20.1	3.0		
H. Flow weighted average concentration (F/C)	0.018170	0.039850	0.008000	0.001250	0.000939	0.016600	0.002460		
G. Flow weighted average concentration x 1000 (mg/l)	18.2	39.9	8.0	1.3	0.9	16.6	2.5		
I. Flow Weighted Mass Emission (kg/annum) (HxB)	<b>4,022</b>	<b>8,820</b>	<b>1,771</b>	<b>277</b>	<b>208</b>	<b>3,674</b>	<b>544</b>		



## **SECTION 2.5: DATA COLLECTION & REPORTING AS PER UWWT DIRECTIVE.**

The Environmental Section of Meath County Council is responsible for all the data collection and reporting requirement under the Urban Waste Water Treatment Directive. All results have been submitted via the EPA Online Returns Website.





## SECTION 2.6: PLANT LOADING CALCULATIONS.

Treatment Plant: Ballivor WwTP

Date Licensed: 08/11/2010

Reporting Period: 08/11/10 to 31/12/10

Monitoring Type: Licence Monitoring

### p.e formula:

**KgBOD/d:**  $(\text{BOD}(\text{mg/l}) \times \text{Flow}(\text{m}^3))/1000$

**p.e:**  $(\text{KgBOD/d}) / 0.060 \text{ kg BOD per capita per day.}$

**Influent BOD kg/annum:**  $(\text{Sum of daily influent flows}(\text{m}^3) \times \text{Average BOD}(\text{mg/l}))/1000$

### Calculations:

Licensed/Design capacity of WwTP (p.e):	2,000
Average influent BOD (mg/l):	191
Average daily influent flow (m <sup>3</sup> /d): <sup>Note1</sup>	606
Sum of the daily influent flows (m <sup>3</sup> /d): <sup>Note2</sup>	232,992
Total influent BOD kg/annum (required for PRTR):	44,502
Calculated p.e:	1,929
Available capacity in the WwTP at the current loading (p.e) <sup>Note3</sup>	71

### Comments:

**Note 1:** The average daily influent flow used to calculate the current plant loading is the average of the all the daily influent flows recorded in 2010. See SECTION 2.2 INFLUENT AND EFFLUENT FLOW REPORT.

**Note 2:** Annual Mass Influent Flow, calculated in SECTION 2.2 INFLUENT AND EFFLUENT FLOW REPORT.

**Note 3:** Because the plant loading calculations are based on two months of influent and flow monitoring data they do not reflect the true loading on the Ballivor waste water treatment plant. Meath Council believe the population equivalent is more in line with the licence application p.e of 1,792.

***SECTION 3***  
**Complaints and Incident Reports**

### ***SECTION 3.1: COMPLAINTS SUMMARY***

There were no complaints recorded during the AER reporting period 08/11/10 to 31/12/10.

### ***SECTION 3.2: INCIDENTS SUMMARY***

The following incident reports were sent to the EPA in 2010. The reports include the Emission Limit Value (ELV) exceedances and the reason for the exceedances. The reports also include the corrective actions taken and the preventative measure put in place by Meath County Council to ensure full compliance with Ballivor's waste water discharge licence.

Incident Reports:

- 1) Incident Ref: 10,010 – ELV Exceedance. Reported March 2011

A copy of each report is available for inspection, centrally at Navan WwTP.

***SECTION 4***  
**Infrastructural Assessment  
&  
Programme of Improvements**

#### **SECTION 4.1:    INFRASTRUCTURAL ASSESSMENT & PROGRAMME OF IMPROVEMENTS.**

As the discharge licence was granted in the last quarter of 2010 no infrastructural assessments or programme of improvements were carried out during the reporting period. A more detailed report will be included in the second AER (01/01/11 to 31/12/11).

## ***SECTION 5***

# **Licence Specific Reports**

## **SECTION 5.1: LICENCE SPECIFIC REPORTS**

As the discharge licence was granted in the last quarter of 2010 no licence specific reports were carried out during the reporting period (08/11/10 – 31/12/10).

**SECTION 6.1: POLLUTION RELEASE AND TRANSFER REGISTER.**

No Pollution, Release and Transfer Register (PRTR) is required for this reporting period as the discharge licence was granted in the last quarter of 2010.





## ***SECTION 7***

# **Approval**

**SECTION 7.0:****APPROVAL**

As required under EPA Waste Water Discharge Licensing, I certify that the above report is true and accurate.

Prepared By:	<b>Enda Collins</b> Environmental Officer, Environment and Water Services Dept. Meath County Council	Signed: 
		Date: 26/08/11
Approved By:	<b>Gerry Boyle</b> Senior Engineer, Environment and Water Services Dept. Meath County Council	Signed: 
		Date: 26 <sup>th</sup> Aug 2011