

**Dripsey Waste Water Treatment Plant**

Model Village

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**NOTES**

1. Dimensions are not to be scaled from drawing.
2. This drawing is to be read in conjunction with the WDWL Application.
3. This drawing is to be read in conjunction with all other application drawings.

Date	Drawn	Survey	Checked	Revision	Description

Cork County Council,  
Southern Division.

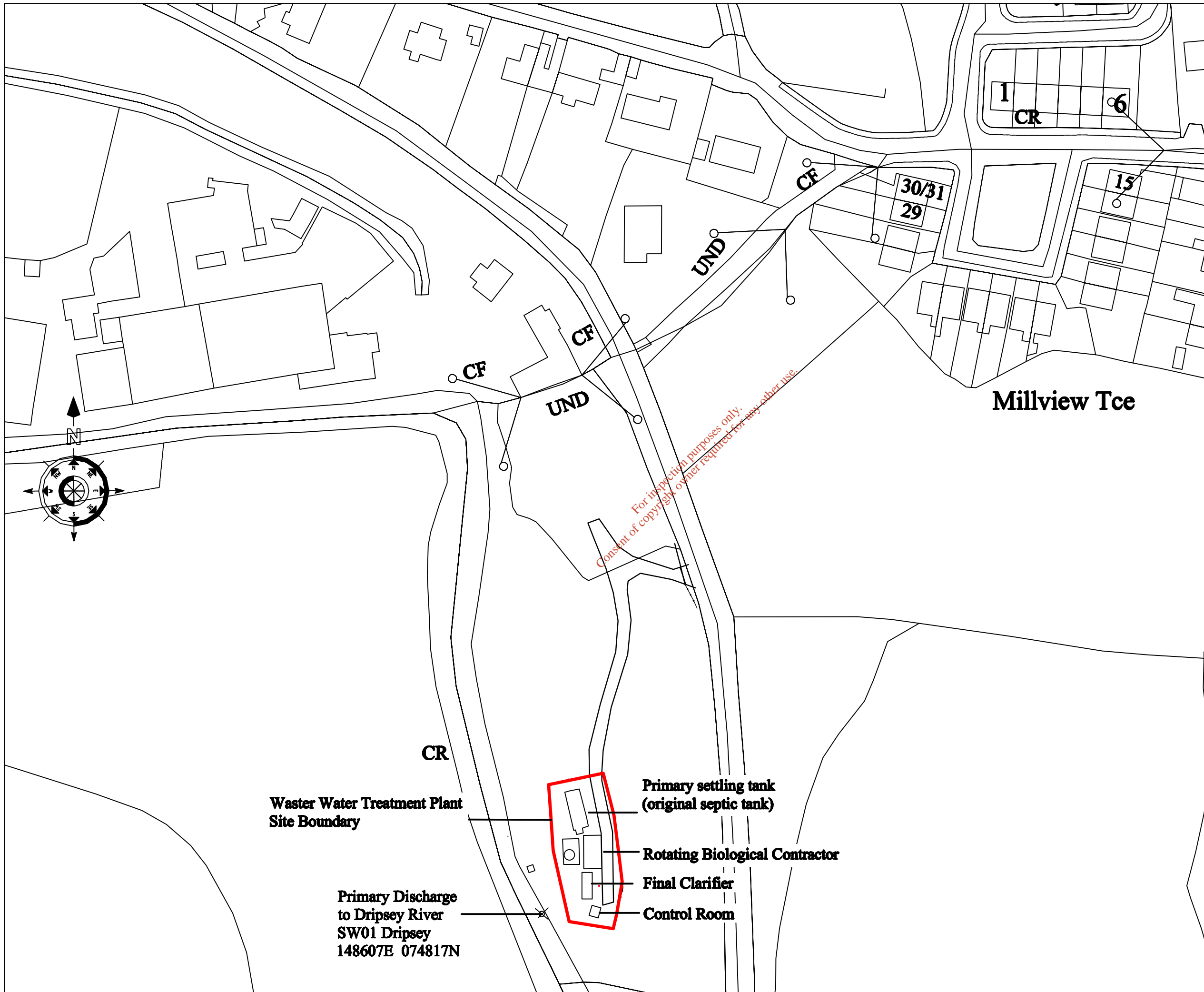


PATRICIA POWER  
DIRECTOR OF SERVICES  
COUNTY HALL,  
CORK.

Job Title:  
**Dripsey  
Wastewater Discharge  
Licence Application**

Drawing Title:  
**General Site Layout 1  
C1 Map 7**

Scales: <b>1:25000 @ A3</b>	Surveyed by: <b>LL</b>	Drawn by: <b>LL &amp; TH</b>
Designed by:	Checked by: <b>N.O'M</b>	Date: <b>June 2009</b>
Drawing number: <b>C1 Map 7</b>	Rev:	



**NOTES**

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2. This drawing is to be read in conjunction with the WWDL Application.
3. This drawing is to be read in conjunction with all other application drawings.

Drawn	Rev	Chkd	Revision Description

Cork County Council,  
Southern Division.



**PATRICIA POWER,**  
DIRECTOR OF SERVICES,  
COUNTY HALL,  
CORK.

Job Title:  
**Dripsey  
Wastewater Discharge  
Licence Application**

Drawing Title:  
**Dripsey WWTW  
General Site Layout 2  
C1 Map 8**

Scales: <b>1:1000 @ A3</b>	Surveyed by: <b>LL</b>	Drawn by: <b>LL &amp; T.H.</b>
Designed by:	Checked by: <b>N.O'M.</b>	Date: <b>June 2009</b>
Drawing number: <b>C1 Map 8</b>	Rev:	

**Waster Water Treatment Plant  
Site Boundary**

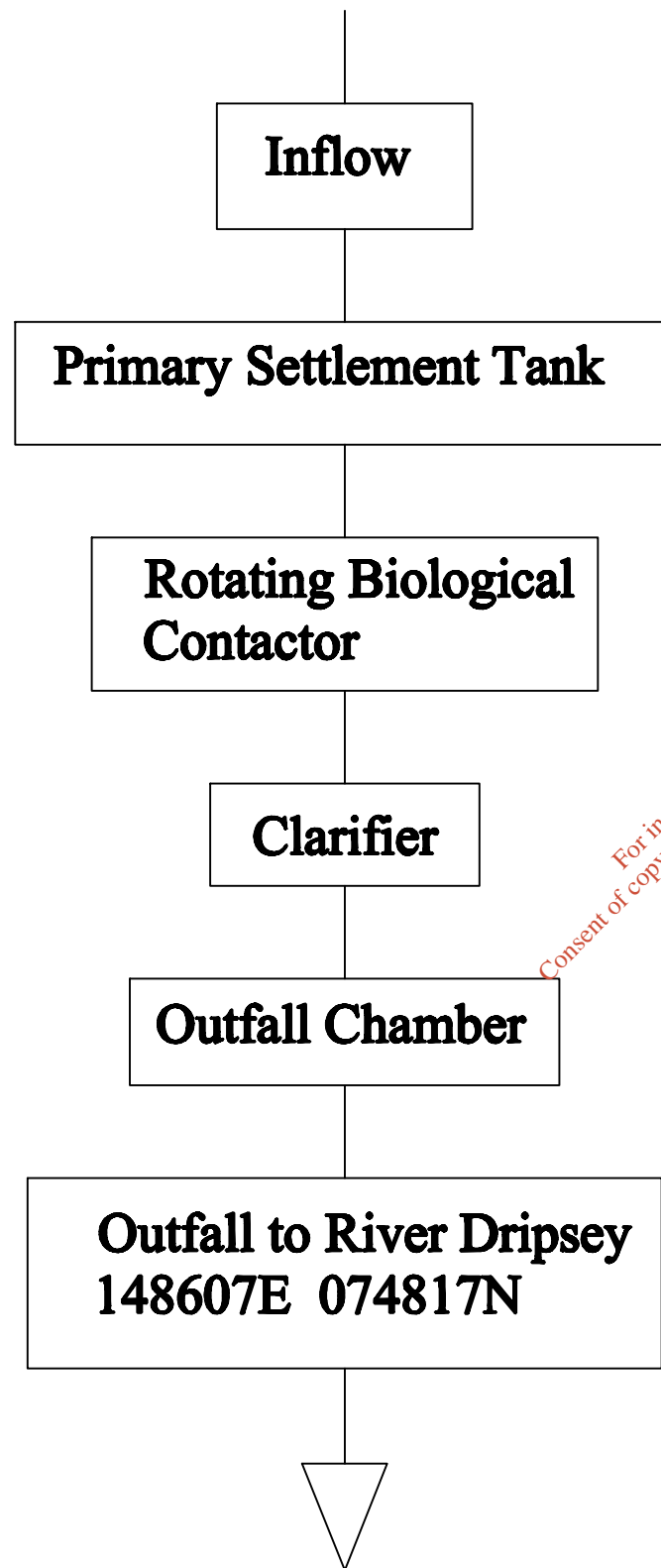
**Primary Discharge  
to Dripsey River  
SW01 Dripsey  
148607E 074817N**

**Primary settling tank  
(original septic tank)**

**Rotating Biological Contractor**

**Final Clarifier**

**Control Room**



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3. This drawing is to be read in conjunction with all other application drawings.

Drawn	Rev	Chgd	Revised Description

Cork County Council,  
Southern Division.



**PATRICIA POWER**  
DIRECTOR OF SERVICES  
COUNTY HALL,  
CORK.

Job Title:  
**Coachford  
Wastewater Discharge  
Licence Application**

Drawing Title:  
**Dripsey  
Process Flow Diagram  
C1 Drawing 1**

Scales: <b>Not to Scale</b>	Surveyed by:	Drawn by: LL & T.H
Designed by:	Checked by: N.O.'M	Date: <b>June 2009</b>
Drawing number: <b>C1 Drawing 1</b>	Rev:	-



# Accreditation Certificate

## Cork County Council

Wastewater Testing Laboratory, Inniscarra, Co. Cork

### Testing Laboratory

Registration number: **016T**

is accredited by the Irish National Accreditation Board (INAB) to undertake testing as detailed in the Schedule bearing the Registration Number detailed above, in compliance with the International Standard ISO/IEC 17025:2005 2<sup>nd</sup> Edition "General Requirements for the Competence of Testing and Calibration Laboratories"  
*(This Certificate must be read in conjunction with the Annexed Schedule of Accreditation)*

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Date of award of accreditation: **01:10:2002**

Date of last renewal of accreditation: **20:09:2007**

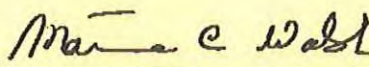
Expiry date of this certificate of accreditation: **20:09:2012**

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This Accreditation shall remain in force until further notice subject to continuing compliance with INAB accreditation criteria, ISO/IEC 17025 and any further requirements specified by the Irish National Accreditation Board.

Manager: 

Mr Tom Dempsey

Chairperson: 

Dr Máire Walsh

Issued on 20th September 2007

Organisations are subject to annual surveillance and are re-assessed every five years. The renewal date on this Certificate confirms the latest date of renewal of accreditation. To confirm the validity of this Certificate, please contact the Irish National Accreditation Board.

The INAB is a signatory of the European co-operation for Accreditation (EA) Testing Multilateral Agreement (MLA) and the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement.

# Schedule of Accreditation



(Annex to Accreditation Certificate)

Permanent Laboratory:  
Category A

## CORK COUNTY COUNCIL

### Chemistry Testing Laboratory

*Initial Registration Date :* 25-April-1991  
*Postal Address:* Waste Water Laboratory  
*(Address of other locations as they apply)* Inniscarra  
Co. Cork  
*Telephone:* +353 (21) 4532700  
*Fax:* +353 (21) 4532777  
*E-mail:*  
*Contact Name:* Ms M Cherry  
*Facilities:* Normally not available for Public testing

# Schedule of Accreditation



Permanent Laboratory:  
Category A

THE IRISH NATIONAL ACCREDITATION BOARD (INAB) is the Irish body for the accreditation of organisations including laboratories.

Laboratory accreditation is available to testing and calibration facilities operated by manufacturing organisations, government departments, educational institutions and commercial testing/calibration services. Indeed, any organisation involved in testing, measurement or calibration in any area of technology can seek accreditation for the work it is undertaking.

Each accredited laboratory has been assessed by skilled specialist assessors and found to meet criteria which are in compliance with ISO/IEC 17025 or ISO/IEC 15189 (medical laboratories). Frequent audits, together with periodic inter-laboratory test programmes, ensure that these standards of operation are maintained.

## Testing and Calibration Categories:

- Category A:** Permanent laboratory calibration and testing where the laboratory is erected on a fixed location for a period expected to be greater than three years.
- Category B:** Site calibration and testing that is performed by staff sent out on site by a permanent laboratory that is accredited by the Irish National Accreditation Board.
- Category C:** Site calibration and testing that is performed in a site/mobile laboratory or by staff sent out by such a laboratory, the operation of which is the responsibility of a permanent laboratory accredited by the Irish National Accreditation Board.
- Category D:** Site calibration and testing that is performed on site by individuals and organisations that do not have a permanent calibration/testing laboratory. Testing may be performed using
- portable test equipment
  - a site laboratory
  - a mobile laboratory or
  - equipment from a mobile or site laboratory

## Standard Specification or Test Procedure Used:

The standard specification or test procedure that is accredited is the issue that is current on the date of the most recent visit, unless otherwise stated.

## Glossary of Terms

### Facilities:

- Public calibration/testing service:** Commercial operations which actively seek work from others.
- Conditionally available for public calibration/testing:** Established for another primary purpose but, more commonly than not, is available for outside work.
- Normally not available for public calibration/testing:** Unavailable for public calibration/testing more often than not.

Laboratory users wishing to obtain assurance that calibration or test results are reliable and carried out to the Irish National Accreditation Board criteria should insist on receiving an accredited calibration certificate or test report. Users should contact the laboratory directly to ensure that this scope of accreditation is current. INAB will, on request, verify the status and scope.

# Scope of Accreditation



**Cork County Council**  
**Chemical Testing Laboratory**

Permanent Laboratory:  
 Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766 Waters	Chemical analysis:	Documented in-house methods based on Standard Methods for the Examination of Water & Wastewater 21 st Edition APHA (See Note 1)
.01 Waters for domestic purposes Surface and ground waters	Biochemical Oxygen Demand 2 - 145,000 mg/l	CP No. 1 Membrane electrode
	Chloride 5 - 1,000 mg/l	CP No. 7 Argentometric method
	ph 2 - 12	CP No. 5 Electrometry
	Suspended Solids 0.5 - 17,500 mg/l	CP No. 3 Gravimetric
	Chemical Oxygen Demand 21 - 135 mg/l 120 - 670,000 mg/l	CP No. 6 Reflux - colourmetric method
	Total phosphorus 0.2 - 5,300 mg/l	US-EPA Approved method/HACH Method CP No.20
	Ammonia 0.1 - 1,000 mg/l NH <sub>3</sub> - N	Documented in-house method CP22 by Konelab based on Method for the Examination of Waters and Associated Material HMSO:1981



# Scope of Accreditation



**Cork County Council**  
**Chemical Testing Laboratory**

Permanent Laboratory:  
 Category A

INAB Classification number (P9) Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
<b>766 Waters</b> .01 Waters for domestic purposes <i>Surface and ground waters</i>	Orthophosphate as P (Konelab) Range: 0.005-1.00 mg O-PO4 P/L High Range: 1000 mg O-PO4 P/L Method Detection Limit: 0.02 mg O-PO4 P/L  Chloride (Konelab) Range: 25-250 mg/L Cl- High Range Conc.: 86,000 mg/L Cl- Method Detection Limit: 25 mg/L Cl-  Sulphate (Konelab) Range: 30-250 mg/L SO4/L High Range Conc.: 35,000 mg/L SO4/L Method Detection Limit: 30 mg SO4/L	CP No. 23 Ascorbic Acid Method   CP No. 24 Ferricyanide Method   CP No. 25 Documented in-house method by Konelab based on method for the examination of waters and waste waters and associated material HMSO: 1981

# Scope of Accreditation



## Cork County Council Chemical Testing Laboratory

Permanent Laboratory:  
Category A

INAB Classification number (P9)	Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766	Waters	Chemical analysis	Documented in-house methods based on Standard Methods for the Examination of Water & Wastewater 21 st Edition APHA (See Note 1)
.05	Trade Wastes <i>Industrial effluents</i> <i>Urban Wastewater</i> <i>Municipal Wastewater</i>	Biochemical Oxygen Demand 2 - 145,000 mg/l	CP No. 1 Membrane electrode
		Chloride 5 - 1,000 mg/l	CP No. 7 Argentometric method
		pH 2 - 12	CP No. 5 Electrometry
		Suspended Solids 0.5 - 17,500 mg/l	CP No. 3 Gravimetric
		Chemical Oxygen Demand 21 - 135 mg/l 120 - 670,000 mg/l	CP No. 6 Reflux - colourmetric method
		Total phosphorus 0.2 - 5,300 mg/l	US-EPA Approved method/HACH Method CP No.20
		Ammonia 0.1 - 1,000 mg/l NH3-N	Documented in-house method CP22 by Konelab based on Method for the Examination of Waters and Associated Material HMSO: 1981.

Notes  
1. APHA American Public Health Association, USA, 21<sup>st</sup> Edition

# Scope of Accreditation



Cork County Council

Permanent Laboratory:

Chemical Testing Laboratory

Category A

INAB Classification number (P9)	Materials/products tested	Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766	Waters	Chemical analysis	Documented in-house methods based on Standard Methods for the Examination of Water & Wastewater 21 st Edition APHA (See Note 1)
.05	Trade Wastes <i>Industrial effluents</i> <i>Urban Wastewater</i> <i>Municipal Wastewater</i>	<p>Orthophosphate as P (Konelab) Range: 0.005 - 1.00 mg O-PO4 P/L High Range: 1000 mg O-PO4 P/L Method Detection Limit: 0.02 mg O-PO4 P/L</p> <p>Chloride (Konelab) Range: 25-250 mg/L Cl- High Range Conc.: 86,600 mg /L Cl- Method Detection Limit: 25mg / L Cl-</p> <p>Sulphate (Konelab)) Range: 30-250 mg/L SO4 /L High Range Conc.: 35,000 mg/L SO4 /L Method Detection Limit: 30 mg SO4 /L</p>	<p>CP No. 1 Membrane electrode</p> <p>CP No. 23 Ascorbic Acid Method</p> <p>CP No. 24 Ferricyanide Method</p> <p>CP No. 25 Documented in-house method by Konelab based on method for the examination of waters and waste waters and associated material HMSO: 1981</p>

Notes  
1. APHA American Public Health Association, USA, 21<sup>st</sup> Edition



### Attachment E4 Dripsey Inlet Table E4

Sample Date	07/05/2009	
Sample	Influent	Average
Sample Code	GT634	
Flow M <sup>3</sup> /Day	*	
pH	6.9	6.9
Temperature °C	*	*
Cond 20 °C	353	353
SS mg/L	25	25
NH <sub>3</sub> mg/L	7.1	7.1
BOD mg/L	42	42
COD mg/L	63	63
TN mg/L	18.3	18.3
Nitrite mg/L	0.215	0.215
Nitrate mg/L	5.075	5.075
TP mg/L	1.38	1.38
O-PO <sub>4</sub> -P mg/L	0.94	0.94
SO <sub>4</sub> mg/L	<30	<30
Phenols µg/L	<0.10	<0.10
Atrazine µg/L	<0.01	<0.01
Dichloromethane µg/L	<1	<1
Simazine µg/L	<0.01	<0.01
Toluene µg/L	<0.28	<0.28
Tributyltin µg/L	not required	not required
Xylenes µg/L	<1	<1
Arsenic µg/L	<0.96	<0.96
Chromium ug/L	<20	<20
Copper ug/L	44	44
Cyanide µg/L	<5	<5
Fluoride µg/L	<100	<100
Lead ug/L	<20	<20
Nickel ug/L	<20	<20
Zinc ug/L	29	29
Boron ug/L	<20	<20
Cadmium ug/L	<20	<20
Mercury µg/L	<0.2	<0.2
Selenium µg/L	2.4	2.4
Barium ug/L	51	51

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## Attachment E4 Dripsey Discharge Outlet Table E4

Sample Date	09/10/2008	16/10/2008	22/01/2009	02/04/2009	07/05/2009			
Sample	Effluent	Effluent	Effluent	Effluent	Effluent	Average	Kg/Day	Kg/year
Sample Code			GT071	GT445	GT635			
Flow M <sup>3</sup> /Day	*	*	*	*	*			
pH	*	7.1	6.7	6.9	7	6.925		
Temperature °C	*	*	*	*	*			
Cond 20°C	*	*	*	*	357	357		
SS mg/L	7	17	20	28	23	19		
NH <sub>3</sub> mg/L	*	2.8	3.1	*	9.5	5.133333333		
BOD mg/L	5.06	5.03	26	36	44	23.218		
COD mg/L	26	32	51	76	62	49.4		
TN mg/L	*	*	17.1	21.9	20.4	19.8		
Nitrite mg/L	*	*	*	*	0.499	0.499		
Nitrate mg/L	*	*	*	*	7.671	7.671		
TP mg/L	*	*	3.3	1.70	1.51	2.17		
O-PO4-P mg/L	*	1.14	0.51	*	1.06	0.903333333		
SO4 mg/L	*	*	<30	*	<30	<30		
Phenols µg/L	*	*	*	*	<0.10	<0.10		
Atrazine µg/L	*	*	*	*	<0.01	<0.01		
Dichloromethane	*	*	*	*	<1	<1		
Simazine µg/L	*	*	*	*	<0.01	<0.01		
Toluene µg/L	*	*	*	*	<0.28	<0.28		
Tributyltin µg/L	*	*	*	*	not required	not required		
Xylenes µg/L	*	*	*	*	<1	<1		
Arsenic µg/L	*	*	*	*	<0.96	<0.96		
Chromium ug/L	*	*	<20	<20	<20	<20		
Copper ug/L	*	*	23	10	10	14.33333333		
Cyanide µg/L	*	*	*	*	<5	<5		
Fluoride µg/L	*	*	*	*	100	100		
Lead ug/L	*	*	<20	<20	<20	<20		
Nickel ug/L	*	*	<20	<20	<20	<20		
Zinc ug/L	*	*	<20	<20	<20	<20		
Boron ug/L	*	*	<20	<20	<20	<20		
Cadmium ug/L	*	*	<20	<20	<20	<20		
Mercury µg/L	*	*	*	*	<0.2	<0.2		
Selenium µg/L	*	*	*	*	3.1	3.1		
Barium ug/L	*	*	47	31.9	31.47	36.79		

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Attachment E4 Dripsey Upstream Table E4				
Sample Date	16/10/2008	02/04/2009	07/05/2009	
Sample	River	River	River	Average
Sample Code		GT444	GT636	
Flow M <sup>3</sup> /Day	*	*	*	
pH	*	*	7.6	7.6
Temperature °C	*	*	*	
Cond 20°C	*	*	156	156
SS mg/L	*	*	<2.5	<2.5
NH <sub>3</sub> mg/L	*	*	<0.1	<0.1
BOD mg/L	*	*	2	2
COD mg/L	*	*	<21	<21
TN mg/L	*	*	3.79	3.79
Nitrite mg/L	*	*	<0.10	<0.10
Nitrate mg/L	*	*	1.15	1.15
TP mg/L	*	*	<0.05	<0.05
O-PO4-P mg/L	<0.05	<0.05	<0.05	<0.05
SO4 mg/L	*	*	<30	<30
Phenols µg/L	*	*	<0.10	<0.10
Atrazine µg/L	*	*	<0.01	<0.01
Dichloromethane	*	*	<1	<1
Simazine µg/L	*	*	<0.01	<0.01
Toluene µg/L	*	*	<0.28	<0.28
Tributyltin µg/L	*	*	not required	not required
Xylenes µg/L	*	*	<1	<1
Arsenic µg/L	*	*	<0.96	<0.96
Chromium ug/L	*	<20	<20	<20
Copper ug/L	*	<20	<20	<20
Cyanide µg/L	*	*	<5	<5
Fluoride µg/L	*	*	<100	<100
Lead ug/L	*	<20	<20	<20
Nickel ug/L	*	<20	<20	<20
Zinc ug/L	*	<20	<20	<20
Boron ug/L	*	<20	<20	<20
Cadmium ug/L	*	<20	<20	<20
Mercury µg/L	*	*	<0.2	<0.2
Selenium µg/L	*	*	1.4	1.4
Barium ug/L	*	72.7	29.76	51.23

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## Attachment E4 Dripsey Downstream Table E4

Sample Date	16/10/2008	02/04/2009	07/05/2009	
Sample	River	River	River	Average
Sample Code		GT443	GT637	
Flow M <sup>3</sup> /Day	*	*	*	
pH	*	*	7.7	7.7
Temperature °C	*	*	*	
Cond 20°C	*	*	163	163
SS mg/L	*	*	<2.5	<2.5
NH <sub>3</sub> mg/L	*	*	<0.1	<0.1
BOD mg/L	*	*	2	2
COD mg/L	*	*	<21	<21
TN mg/L	*	*	4.18	4.18
Nitrite mg/L	*	*	<0.10	<0.10
Nitrate mg/L	*	*	1.33	1.33
TP mg/L	*	*	<0.05	<0.05
O-PO4-P mg/L	<0.05	<0.05	<0.05	<0.05
SO4 mg/L	*	*	<30	<30
Phenols µg/L	*	*	<0.10	<0.10
Atrazine µg/L	*	*	<0.01	<0.01
Dichloromethane	*	*	<1	<1
Simazine µg/L	*	*	<0.01	<0.01
Toluene µg/L	*	*	<0.28	<0.28
Tributyltin µg/L	*	*	not required	not required
Xylenes µg/L	*	*	<1	<1
Arsenic µg/L	*	*	<0.96	<0.96
Chromium ug/L	*	<20	<20	<20
Copper ug/L	*	<20	<20	<20
Cyanide µg/L	*	*	<5	<5
Fluoride µg/L	*	*	<100	<100
Lead ug/L	*	<20	<20	<20
Nickel ug/L	*	<20	<20	<20
Zinc ug/L	*	<20	<20	<20
Boron ug/L	*	<20	<20	<20
Cadmium ug/L	*	<20	<20	<20
Mercury µg/L	*	*	<0.2	<0.2
Selenium µg/L	*	*	1.7	1.7
Barium ug/L	*	69	33.155	51.0775

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