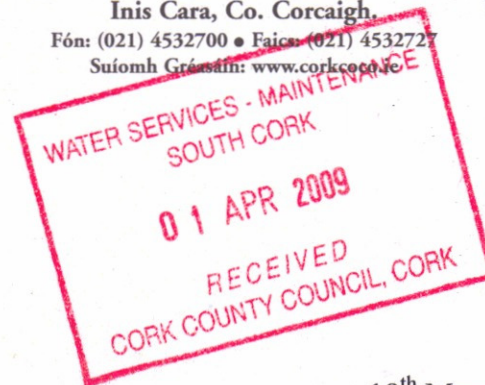


# Comhairle Contae Chorcaí Cork County Council

Environmental Directorate,  
Inniscarra, Co. Cork.  
Tel. No. (021) 4532700 • Fax No. (021) 4532727  
Web: www.corkcoco.ie  
An Stiúrthóireacht Comhshaoil,  
Inis Cara, Co. Corcaigh  
Fón: (021) 4532700 • Faisc: (021) 4532727  
Suíomh Gréasáin: www.corkcoco.ie



N. O' Mahony  
Cork Co. Council  
Bairbre  
Co. Cork



18<sup>th</sup> March 2009

## Re: Monitoring Results for 2008

Dear Sir/Madam,

Enclosed are the licensed discharge wastewater monitoring results for your facility for 2008. Please note that Total Nitrogen and Total Phosphorus tests were subcontracted to an outside laboratory since early October 2008.

Measurements of uncertainty values for the test are as follows:

Test	Range mg/l	Estimated Uncertainty
TN	100	+ 3.8 mg/l
TP	0.5	+ 0.04 mg/l
TP	5 mg/l	+ 0.44 mg/l
TP	10 mg/l	+ 0.87 mg/l

Please accept my apologies for the late arrival of results but due to circumstances outside my control. I was unable to issue results in February.

If you have any queries in relation to the results, please do not hesitate to contact me.

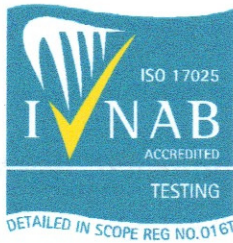
Yours sincerely,



Valerie Hannon,  
A/Senior Executive Scientist,  
Wastewater Laboratory.

Direct Dial: 021 – 4532707  
Fax: 021 – 4532777  
Email: [valerie.hannon@corkcoco.ie](mailto:valerie.hannon@corkcoco.ie)





Laboratory Test Report  
Cork County Council  
Waste Water Laboratory  
Inniscarra, Co. Cork

March 19, 2009

Industry Name Dripsey Sewage Treatment Plant  
Address Dripsey,  
Co. Cork

Industry Code No. 335  
Report Ref No. 119-03-09-123  
Issued to No. Mahony  
STP

Licence No. Type S

Licence	Volume	pH	B.O.D.	C.O.D.	S.Solids	TP-P	Code	Comments
Limit	m3	12.99	mg/l	mg/l	mg/l	mg/l		
999999		3.99	25	125	35	99.9		
Date								
06/05/08		7.1	7.5	29	15	1.47	GS384	G OPO4-P=1.33mg/l
10/07/08			22	69	26	2.15	GS632	G TN-N=21.8mg/L
09/10/08			5.1	26	7		GS1036	G
16/10/08		7.1	5.0	32	17		GS1089	G NH3-N= 2.8mg/l, OPO4-P= 1
% Compl.	***	100	100	100	100	100	***	***
Average	******	7.10	9.90	39.00	16.25	1.81	*****	*****

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The samples are received at the Laboratory on the day of sampling. The above test methods are based on Standard Methods for the examination of Water and Waste Water, 21st Edition 2005, APHA, AWWA, WEF.

C = Composite Sample, G = Grab Sample.

The compliance value may be varied on items marked with an \* by the application of uncertainty of measurement values on reverse Page Chemical Procedure Numbers(CP No.) for INAB accredited tests are as follows:

- CP NO. 1 = B.O.D.
- CP NO. 3 = S.S.
- CP NO. 20 = TP-P
- CP NO. 5 = pH
- CP NO. 6 = C.O.D.
- ~~CP NO. 7 = Cl~~
- CP NO. 22 = Ammonia(KONELAB)
- CP NO. 23 = OPO4-P(KONELAB)
- CP NO. 24 = Chloride (KONELAB)
- CP NO. 25 = Sulphate(KONELAB)

This report relates only to the samples listed above. This report shall not be reproduced except in full and only with the approval of the testing laboratory. Cork County Council is not accredited by INAB for tests marked with \$. Kg loadings based on flows as supplied by the company. ~ indicates results that have been edited.

Reported by: V. Hannon Date: 19/03/09

Ms. V. Hannon Technical Manager   
Deputy Technical Manager

CTR 001

Issue No 36

VH  
~~November 2007~~ October 2008

## **Wastewater Laboratory Cork County Council- Test Report Addendum**

- a. Sample date reported in column 1 on this report is the date of collection of the sample from the industry name and address as outlined at the top of the report.
- b. Cork County Council wastewater laboratory are not accredited for sample collection.
- c. Data reported in (d) below is defined in section 5.10.3 (c) in wastewater laboratory quality manual.

### d. Table of Uncertainty Of Measurement – Estimate Of Values For Accredited Tests

Chemical Procedure No.	range	Test Name	Estimated Uncertainty	Units
CP No. 1	1 - 8 mg/l	Biochemical Oxygen Demand (BOD)	± 0.30	mg/l
CP No. 1	9 -70 mg/l	Biochemical Oxygen Demand (BOD)	± 3.2	mg/l
CP No. 1	71 - 700 mg/l	Biochemical Oxygen Demand (BOD)	± 40	mg/l
CP No. 3	35 mg/l	Suspended Solids (SS)	± 6.4	mg/l
CP No. 3	200 - 400mg/l	Suspended Solids (SS)	± 41.6	mg/l
CP No. 3	700 - 1000mg/l	Suspended Solids (SS)	± 80.0	mg/l
CP No. 5	2 - 12	pH	± 0.12	pH Units
CP No. 6	< 6 mg/l	Chemical Oxygen Demand (COD LR)	± 5.6	mg/l
CP No. 6	15 - 75 mg/l	Chemical Oxygen Demand (COD LR)	± 10.6	mg/l
CP No. 6	100 -135 mg/l	Chemical Oxygen Demand (COD LR)	± 17.4	mg/l
CP No. 6	120 - 1500mg/l	Chemical Oxygen Demand (COD LR) High Range	± 26.8	mg/l
CP No. 20	0.2 - 2.5 mg/l	Total Phosphorus (TP,P)	± 0.22	mg/l
CP No. 22	0.1 - 0.9 mg/l	Ammonia (Konelab)	± 0.04	mg/l
CP No. 22	1.0 - 2.0 mg/l	Ammonia (Konelab)	± 0.10	mg/l
CP No. 22	2 - 10 mg/l	Ammonia (Konelab)	± 0.32	mg/l
CP No. 22	11 - 19 mg/l	Ammonia (Konelab)	± 0.72	mg/l
CP No. 22	20 - 25 mg/l	Ammonia (Konelab)	± 1.56	mg/l
CP No. 23	0.05 - 1.00 mg/l	Orthophosphate as P (Konelab)	± 0.04	mg/l
CP No. 24	25.00 - 99.00 mg/l	Chloride (Konelab)	± 3.04	mg/l
CP No. 24	100.00 - 200.00 mg/l	Chloride (Konelab)	± 11.16	mg/l
CP No. 25	30.00 - 199.00 mg/l	Sulphate (Konelab)	± 3.42	mg/l
CP No. 25	200.00 - 250.00 mg/l	Sulphate (Konelab)	± 8.70	mg/l

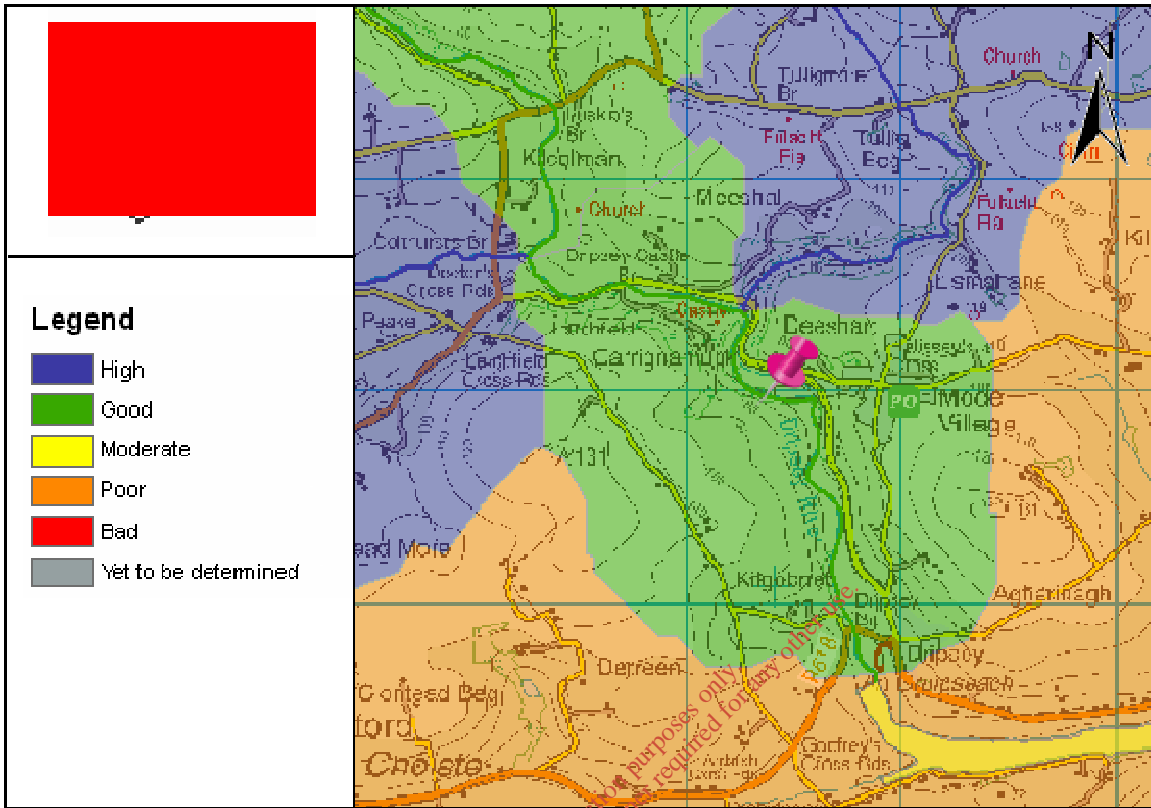
**January 2009**

The raw data used to evaluate the above estimations is stored in the Wastewater Laboratory, Cork County Council.

The method followed is located in the Uncertainty of Measurement file and in the Eurachem Guidelines for Quantifying Uncertainty in Analytical Measurement.

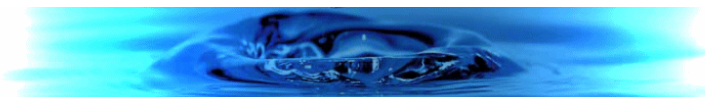


**Full Report for Waterbody Dripsey, Trib of Lee**



Date Reported to Europe: 22/12/2008

Date Report Created 27/05/2009



**Summary Information:**

**WaterBody Category:** Subbasin Waterbody

**WaterBody** Dripsey,

**WaterBody** IE\_SW\_19\_1713

**Overall** Good

**Overall** Protect

**Overall Risk:** 2b Not At Risk

**Applicable** Unsewered;

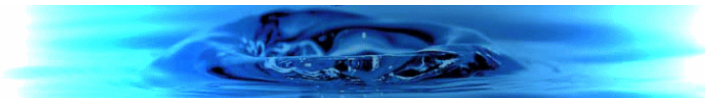
**Supplementary** Report data



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Date Reported to Europe: 22/12/2008

Date Report Created 27/05/2009



**Status Report**

**WaterBody Category:** Subbasin  
**WaterBody Name:** Dripsey,  
**WaterBody Code:** IE\_SW\_19\_1713  
**Overall Status Result:** Good

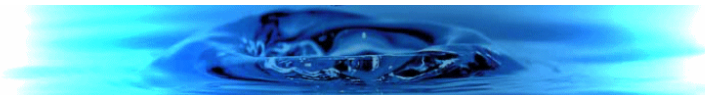


<b>Status Element Description</b>		<b>Result</b>
EX	Status from Monitored or Extrapolated Waterbody	
<b>Biological Elements</b>		
Q	Macroinvertebrates (Q-Value)	<span style="background-color: #90EE90; padding: 2px;">Good</span>
F	Fish	n/a
DI	Phytobenthos (Diatoms)	n/a
FPM	Status value as determined by Margartifera	n/a
<b>Supporting Elements</b>		
MOR	Hydromorphology	n/a
SP	Specific Pollutants	n/a
PC	General Physico-Chemical	n/a
<b>Chemical Status</b>		
PAS	Chemical Status	n/a
<b>Overall Ecological Status</b>		
O	Overall Ecological Status	<span style="background-color: #90EE90; padding: 2px;">Good</span>

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**Risk Report**

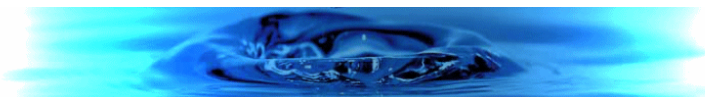
**WaterBody Category:** Subbasin  
**WaterBody Name:** Dripsey,  
**WaterBody Code:** IE\_SW\_19\_1713  
**Overall Risk Result:** 2b Not At Risk



Risk Test Description	Risk
<b>Point Risk Sources</b>	
RP1 WWTPs (2008)	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RP2 CSOs	<span style="background-color: #e67e22; padding: 2px;">1b</span> Probably At Risk
RP3 IPPCs (2008)	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RP4 Section 4s (2008)	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RPO Overall Risk from Point Sources - Worst Case (2008)	<span style="background-color: #e67e22; padding: 2px;">1b</span> Probably At Risk
<b>Diffuse Risk Sources</b>	
RD1 EPA diffuse model (2008)	<span style="background-color: #e67e22; padding: 2px;">1b</span> Probably At Risk
RD2a Road Wash - Soluble Copper	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RD2b Road Wash - Total Zinc	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RD2c Road Wash - Total Hydrocarbons	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RD3 Railways	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RD4a Forestry - Acidification (2008)	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RD4b Forestry - Suspended Solids (2008)	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RD4c Forestry - Eutrophication (2008)	<span style="background-color: #e67e22; padding: 2px;">2a</span> Probably Not At Risk
RD5a Unsewered Areas - Pathogens (2008)	<span style="background-color: #e67e22; padding: 2px;">2a</span> Probably Not At Risk
RD5b Unsewered Phosphorus (2008)	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RD5 Overall Unsewered (2008)	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RD6a Arable	<span style="background-color: #e67e22; padding: 2px;">2a</span> Probably Not At Risk
RD6b Sheep Dip	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RD6c Forestry - Dangerous Substances	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RDO Diffuse Overall -Worst Case (2008)	<span style="background-color: #e67e22; padding: 2px;">1b</span> Probably At Risk
<b>Morphological Risk Sources</b>	
RM1 Channelisation (2008)	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RM2 Embankments (2008)	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RM3 Impoundments	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RM4 Water Regulation	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk
RMO Morphology Overall - Worst Case (2008)	<span style="background-color: #e67e22; padding: 2px;">2b</span> Not At Risk

Date Reported to Europe: 22/12/2008

Date Report Created 27/05/2009



<b>Q/RDI or Point/Diffuse</b>		
QPD	Q class/EPA Diffuse Model or worst case of Point and Diffuse (2008)	2b Not At Risk
<b>Hydrology</b>		
RHY1	Water balance - Abstraction	2b Not At Risk
<b>Overall Risk</b>		
RA	Rivers Overall - Worst Case (2008)	2b Not At Risk

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Date Report Created 27/05/2009





**Objectives Report**

**WaterBody Category:** Subbasin  
 Waterbody  
**WaterBody Name:** Dripsey,  
**WaterBody Code:** IE\_SW\_19\_1713  
**Overall Objective:** Protect

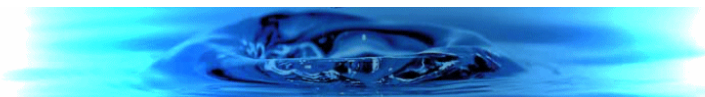


<b>Objectives Description</b>		<b>Result</b>
<b>Objectives</b>		
OB1	Objective 1 - Protected Areas	Not Applicable
OB2	Objective 2 - Protect High and Good Status	Protect
OB3	Objective 3 - Restore Less Than Good Status	Not Applicable
OB4	Objective 4 - Reduce Chemical Pollution	Not Applicable
OBO	Overall Objective	Protect
<b>Deadline</b>		
YR	Default Year by which the objective must be met	2015
EX	Revised Objective Deadline	2007
OBO	Overall Objective and Deadline	Protect

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**Basic Measures Report**

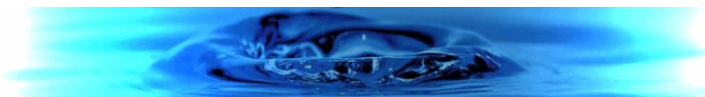
**WaterBody Category:** Subbasin Waterbody  
**WaterBody Name:** Dripsey, Trib of Lee  
**WaterBody Code:** IE\_SW\_19\_1713



<b>Basic Measures Description</b>		<b>Applicable</b>
<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	No
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 27/05/2009



**Urban and Industrial Discharges Supplementary Measures Report**

**WaterBody Category:** Subbasin Waterbody

**WaterBody Name:** Dripsey, Trib of Lee

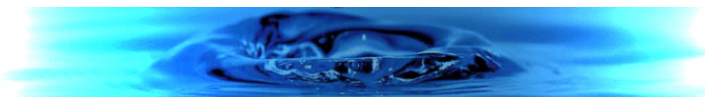
**WaterBody Code:** IE\_SW\_19\_1713



	<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?	No
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.	No
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.	No
PB6	Basic Measure 6 - Investigate contributions to the collection system of specific substances known to impact ecological status.	No
PB7	Basic Measure 7 - Upgrade WWTP to increase capacity.	No
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.	No
PS2	Supplementary Measure 2 - Impose development controls where there is, or is likely to be in the future, insufficient capacity at treatment plants.	No
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
PS8	Supplementary Measure 8 - Upgrade the plant to remove specific substances known to impact on water quality status.	No

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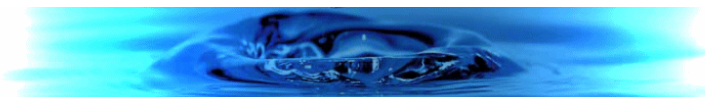


PS9	Supplementary Measure 9 - Install ultra-violet or similar type treatment.	No
PS10	Supplementary Measure 10 - Relocate the point of discharge.	No

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**Physical Modifications Supplementary Measures Report**

**WaterBody Category:** Subbasin  
**WaterBody Name:** Dripsey,  
**WaterBody Code:** IE\_SW\_19\_1713

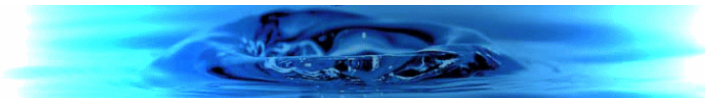


	<b>Physical Modifications Supplementary Measures</b>	<b>Applicable</b>
	<b>Reduce</b>	
SM1	Codes of Practice	Yes
SM2	Support for voluntary initiatives	Yes
	<b>Remediate</b>	
SM3	Channelisation impact remediation schemes	No
SM4	Channelisation investigation	No
SM5	Overgrazing remediation	No
SM6	Impassable 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** Subbasin Waterbody  
**WaterBody Name:** Dripsey, Trib of Lee  
**WaterBody** IE\_SW\_19\_1713

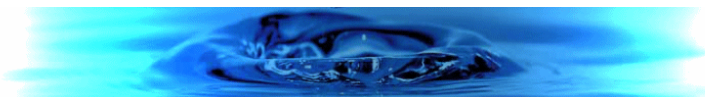


<b>Supplementary Measures for</b>		<b>Applicable</b>
<b>Unsewered Properties</b>		
SP1	Amend building regulations	Yes
SP2	Establish certified expert panels for site investigation and certification of installed systems	Yes
SP3	Assess applications for new unsewered systems by applying risk mapping/decision 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**

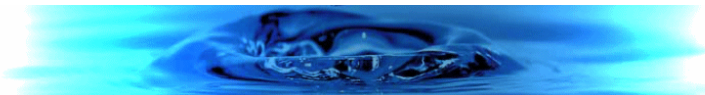
**WaterBody Category:** Subbasin Waterbody  
**WaterBody Name:** Dripsey, Trib of Lee  
**WaterBody Code:** IE\_SW\_19\_1713



	<b>Forestry Measures for</b>	<b>Applicable</b>
	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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				Parameter	Nitrite	Molybdate	Ammonium	Nitrate
					NO2	P	NH4	NO3
				Max.	0.05	Varies	0.5	25
				Target	--	--	--	--
				Min.	--	--	--	--
Project	Project Re	Location	Sample Date	Comments	mg/l	mg/l	mg/l	mg/l
The Dripsey		Dripsey Br.	09-Jan-02		0.02	0.022	0.05	18.43
The Dripsey		Luskins Br.	09-Jan-02		<b>0.267</b>	0.018	0.05	15.81
The Dripsey		Dripsey br u/s	09-Jan-02		0.013	0.006	0.05	10.45
The Dripsey		Dripsey Br.	13-Feb-02		0.029	0.021	0.05	20
The Dripsey		Dripsey Br.	13-Mar-02		0.016	0.02	0.03	14.28
The Dripsey		Dripsey Br.	12-Mar-03		0.017	0.026	< 0.02	18.01
The Dripsey		Dripsey br u/s	12-Mar-03		0.017	0.024	< 0.02	16.6
The Dripsey		Luskins Br.	12-Mar-03		0.017	0.023	0.02	15.8
The Dripsey		Dripsey Br.	14-Aug-03	SG out of water	0.016	<b>0.036</b>	0.03	14.63
The Dripsey		Luskins Br.	28-Mar-07		0.02	< 0.006	0.035	15
The Dripsey		Dripsey Br.	13-Jun-07		0.048	<b>0.035</b>	0.035	21.9
The Dripsey		Luskins Br.	13-Jun-07		0.028	0.016	< 0.026	16.9
The Dripsey		NW Toureen	13-Jun-07		< 0.013	0.012	< 0.026	< 1.8
The Dripsey		NW Toureen	20-Sep-07		0.014	0.013	0.047	
The Dripsey		Luskins Br.	20-Sep-07		< 0.013	0.008	0.038	
The Dripsey		Dripsey Br.	20-Sep-07		0.019	0.019	< 0.026	
The Dripsey		Dripsey Br.	15-Nov-07		0.019	0.029	0.03	17.5
The Dripsey		Luskins Br.	15-Nov-07		< 0.013	0.008	0.032	13.9
The Dripsey		NW Toureen	15-Nov-07		< 0.013	0.016	0.045	< 1.8
The Dripsey		Dripsey Br.	12-Mar-08		0.016	0.027	0.026	18.9
The Dripsey		NW Toureen	12-Mar-08		< 0.013	0.006	0.078	< 1.8
The Dripsey		Luskins Br.	12-Mar-08		< 0.013	0.016	0.028	14.9
The Dripsey		NW Toureen	11-Jun-08		0.014	0.02	0.05	4.1
The Dripsey		Dripsey Br.	11-Jun-08		<b>0.075</b>	0.03	0.034	19.3
The Dripsey		Luskins Br.	11-Jun-08		0.018	0.015	0.029	15.6
The Dripsey		NW Toureen	13-Aug-08		0.035	0.014	0.066	2.1
The Dripsey		Luskins Br.	13-Aug-08		0.038	<b>0.063</b>	0.082	4.1
The Dripsey		Dripsey Br.	08-Oct-08		0.019	0.029	0.031	16.5
The Dripsey		Dripsey Br.	04-Dec-08		0.034	<b>0.053</b>	0.09	12
The Dripsey		Luskins Br.	04-Dec-08		<b>0.029</b>	0.036	0.103	8.6
The Dripsey		NW Toureen	04-Dec-08		0.023	0.015	0.031	< 1.8
The Dripsey		Dripsey Br.	11-Feb-09		0.016	0.023	0.026	<b>26.2</b>
The Dripsey		NW Toureen	25-Feb-09		< 0.013	0.015	0.032	< 1.8
The Dripsey		Luskins Br.	25-Feb-09		< 0.013	0.01	0.016	18.5
The Dripsey		Dripsey Br.	12-Mar-09		0.022	0.019	0.027	17.37
The Dripsey		Dripsey Br.	08-Apr-09		0.028	0.019	0.055	15

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				Parameter	Nitrite	Molybdate P	Ammonium	Nitrate
					NO2	P	NH4	NO3
				Max.	0.05	0.035	0.5	25
				Target	--	--	--	--
				Min.	--	--	--	--
Project	Project Re	Location	Sample Date	Comments	mg/l	mg/l	mg/l	mg/l
Lee		Rooves Be	09-Jan-07		0.022	0.018	0.094	8.7
Lee		Rooves Be	17-Jan-07		0.023	0.014	0.041	9.9
Lee		Rooves Be	08-Feb-07		0.029	0.013	0.07	
Lee		Rooves Be	15-Mar-07		0.029	0.019	0.067	
Lee		Rooves Be	18-Apr-07		0.025	< 0.006	< 0.026	9.8
Lee		Rooves Be	09-May-07		0.038	< 0.006	0.038	
Lee		Rooves Be	13-Jun-07		0.043	< 0.006	0.039	
Lee		Rooves Be	11-Jul-07		0.039	< 0.006	0.039	
Lee		Rooves Be	07-Aug-07		0.035	0.008	< 0.026	3.5
Lee		Rooves Be	20-Sep-07		<b>0.074</b>	< 0.006	0.073	
Lee		Rooves Be	10-Oct-07		0.043	< 0.006	< 0.026	
Lee		Rooves Be	15-Nov-07		<b>0.051</b>	0.008	0.076	4.3
Lee		Rooves Be	12-Dec-07		0.025	0.018	0.053	
Lee		Rooves Be	21-Feb-08		0.022	0.014	0.101	8.9
Lee		Rooves Be	12-Mar-08		0.015	< 0.006	0.027	8.1
Lee		Rooves Be	10-Apr-08		0.017	< 0.006	< 0.026	
Lee		Rooves Be	14-May-08		< 0.013	< 0.006	0.045	
Lee		Rooves Be	11-Jun-08		0.045	< 0.006	0.031	
Lee		Rooves Be	09-Jul-08		0.03	< 0.006	0.062	
Lee		Rooves Be	13-Aug-08		0.034	0.008	0.081	4.9
Lee		Rooves Be	10-Sep-08		0.027	0.014	0.061	
Lee		Rooves Be	08-Oct-08		0.028	0.006	0.058	
Lee		Rooves Be	12-Nov-08		0.021	0.014	0.041	
Lee		Rooves Be	10-Dec-08		0.03	0.016	0.061	
Lee		Rooves Be	15-Jan-09		0.029	0.021	0.072	
Lee		Rooves Be	11-Feb-09		0.017	0.012	0.061	
Lee		Rooves Be	12-Mar-09		0.023	0.008	0.039	5.6
Lee		Rooves Be	08-Apr-09		0.02	0.007	0.015	

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Parameter	Temperature	Dissolved O <sub>2</sub>	pH	BOD	Nitrite	Molybdate	Ammonium	Nitrate	Hardness	Alkalinity	Appearance	Dissolved	Suspended	Colour	Chloride	Conductivity	Copper (D)	Total Zinc	
Max.	--	15	9	5	0.05	0.035	0.5	25	--	--	--	150	--	500	--	--	--	--	
Target	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Min.	--	5	6	--	--	--	--	--	--	--	--	50	--	--	--	--	--	--	
Project	Location	Sample Date	Comments	Degrees C	mg/l	pH units	mg/l	mg/l	mg/l	mg/l	mg/l	% O <sub>2</sub>	mg/l	Hazen	mg/l	µS/cm	mg/l	mg/l	
Lee	Carrigadrohid	09-Jan-07		5.3	11.9	7.5	< 1	0.021	0.016	0.06	8.6	47	28	clear	96	1	45	144	
Lee	Carrigadrohid	17-Jan-07		7.8	10.8	7.5	< 1	0.024	0.013	0.046	8.8	42	24	clear	92	2	44	122	
Lee	Carrigadrohid	08-Feb-07		5.7	12.1	7.7	< 1	0.025	0.012	0.052			34		100	2	25	142	< 0.001
Lee	Carrigadrohid	15-Mar-07		9.7	10.7	7.2	< 1	0.024	0.018	0.057		63		clear	94	4			0.001
Lee	Carrigadrohid	18-Apr-07		15	9.4	7.7	< 1	0.04	< 0.006	0.034	8.9	65	40	clear	92	1			0.002
Lee	Carrigadrohid	09-May-07		14.7	7.8	7.5	< 1	0.056	< 0.006	0.062		66	56	clear	78	1	28		0.001
Lee	Carrigadrohid	11-Jul-07		17.6	9.7	7.5	1.1	0.026	< 0.006	< 0.026		37	24		101	3			0.001
Lee	Carrigadrohid	07-Aug-07		18.3	10.1	7.8	1.3	0.029	< 0.006	< 0.026	3.1	56	32		105	2			
Lee	Carrigadrohid	14-May-08		17.2	9.2	7.6	< 1	< 0.013	< 0.006	0.044				96	1		131		
Lee	Carrigadrohid	11-Jun-08		16.3	6.8	7.4	< 1	0.036	< 0.006	0.093				Clear	68	2		129	
Lee	Carrigadrohid	09-Jul-08		15.3	8.8	7.3	1.6	0.027	0.013	0.063				clear	89	3.8			
Lee	Carrigadrohid	13-Aug-08		16.6	9.9	7.6	1.7	0.035	0.007	0.075	4.5			Clear	106	8		122	
Lee	Carrigadrohid	10-Sep-08		15.1	9.1	7.3	1.5	0.026	0.012	0.069					91	4		105	
Lee	Carrigadrohid	08-Oct-08		13.6	9.8	7.7	< 1	0.028	< 0.006	0.033					93	1			
Lee	Carrigadrohid	12-Nov-08		7.4	11.1	7.4	< 1	0.017	0.025	0.056					92	1			
Lee	Carrigadrohid	10-Dec-08		5.8	10	7.4	< 1	0.024	0.013	0.049				clear	81	1			
Lee	Carrigadrohid	15-Jan-09		7.2	11.2	7.3	< 1	0.022	0.017	0.068				clear	95	3			
Lee	Carrigadrohid	11-Feb-09		5	11	7.6	< 1	0.015	0.012	0.033				clear	85		38	158	
Lee	Carrigadrohid	12-Mar-09		8	11.1	7.5	< 1	0.019	0.007	0.056	4.2			clear	94	2		106	
Lee	Carrigadrohid	08-Apr-09		10.9	11	7.8	< 1	0.019	< 0.006	0.011				clear	100	3		141	

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Parameter	Temperature	Dissolved O <sub>2</sub>	pH	BOD	Nitrite	Molybdate	Ammonium	Nitrate	Hardness	Alkalinity	Appearance	Dissolved	Suspended	Zn	Colour	Chloride	Conductivity	Copper (D)	Total Zinc	
Max.	--	15	9	5	0.05	0.035	0.5	25	--	--	--	150	--	Zn	Hz	Cl	--	Diss. Cu.	--	
Target	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Min.	--	5	6	--	--	--	--	--	--	--	--	50	--	--	--	--	--	--	--	
Project	Location	Sample Date	Comments	Degrees C	mg/l	pH units	mg/l	mg/l	mg/l	mg/l	mg/l	% O <sub>2</sub>	mg/l	µg/l	Hazen	mg/l	µS/cm	mg/l	mg/l	
Lee	Rooves Beg	09-Jan-07		5.2	11.9	7.4	1.1	0.022	0.018	0.094	8.7	46	28	clear	95	1				
Lee	Rooves Beg	17-Jan-07		8.3	10.6	7.4	< 1	0.023	0.014	0.041	9.9	42	24		91	2				
Lee	Rooves Beg	08-Feb-07		5.9	11.7	7.6	< 1	0.029	0.013	0.07			30		95	2		16.1	123	
Lee	Rooves Beg	15-Mar-07		9.1	11	7.5	< 1	0.029	0.019	0.067			48		94	4				0.001
Lee	Rooves Beg	18-Apr-07		16.4	8.9	8.1	1.1	0.025	< 0.006	< 0.026	9.8	66	44	clear	91	2				0.001 < 0.002
Lee	Rooves Beg	09-May-07		14.2	9.5	7.6	< 1	0.038	< 0.006	0.038			66	44	Copepods	94	1		29	0.001 < 0.025
Lee	Rooves Beg	13-Jun-07		20	9.2	7.9	1.7	0.043	< 0.006	0.039			66	42	copepods	102	1		18	0.001 < 0.001
Lee	Rooves Beg	11-Jul-07		17.9	9.6	7.3	2.4	0.039	< 0.006	0.039			43	30		101	5			0.002 < 0.025
Lee	Rooves Beg	07-Aug-07		19.5	10.4	7.8	1.9	0.035	0.008	< 0.026	3.5	63	32		114	3				
Lee	Rooves Beg	20-Sep-07		16.9	6.8	7.6	1.1	0.074	< 0.006	0.073			66	40		70	1			< 0.025
Lee	Rooves Beg	10-Oct-07		15.7	7.5	7.9	< 1	0.043	< 0.006	< 0.026			64	42		75	2		13.2	
Lee	Rooves Beg	15-Nov-07		11.4	8.5	7.8	< 1	0.051	0.008	0.076	4.3	26	36		77	< 1		13.7	125	< 0.025
Lee	Rooves Beg	12-Dec-07		8.2	10.3	7.2	< 1	0.025	0.018	0.053			41	30		87	3			
Lee	Rooves Beg	21-Feb-08		8.4	11	7.6	< 1	0.022	0.014	0.101	8.9				clear	94	2		< 25	< 0.004
Lee	Rooves Beg	12-Mar-08		7.5	12.3	7.8	< 1	0.015	< 0.006	0.027	8.1	47	36		clear	104	< 1		< 25	< 0.004
Lee	Rooves Beg	10-Apr-08		9.9	12.1	8	1.3	0.017	< 0.006	< 0.026					clear	109	3			
Lee	Rooves Beg	14-May-08		18.1	9.2	7.8	< 1	< 0.013	< 0.006	0.045					clear	98	2			149
Lee	Rooves Beg	11-Jun-08		18.5	9.4	7.8	< 1	0.045	< 0.006	0.031					Clear	98	1			139
Lee	Rooves Beg	09-Jul-08		16.9	8.7	7.4	1.3	0.03	< 0.006	0.062					clear	91	2			
Lee	Rooves Beg	13-Aug-08		16.6	10.4	7.5	< 1	0.034	0.008	0.081	4.9				Clear	110	3			116
Lee	Rooves Beg	10-Sep-08		15	9	7.3	1.1	0.027	0.014	0.061					clear	90	3			107
Lee	Rooves Beg	08-Oct-08		14.4	11.2	7.7	< 1	0.028	0.006	0.058			55			109	1			
Lee	Rooves Beg	12-Nov-08		8	11	7.5	< 1	0.021	0.014	0.041						93	2			
Lee	Rooves Beg	10-Dec-08		8	11.8	7.5	< 1	0.03	0.016	0.061					clear	105	2			
Lee	Rooves Beg	15-Jan-09		7.4	10.8	7.2	< 1	0.029	0.021	0.072					clear	93	4			
Lee	Rooves Beg	11-Feb-09		5.1	12.1	7.5	< 1	0.017	0.012	0.061					clear	94			56	135
Lee	Rooves Beg	12-Mar-09		8.9	11.1	7.5	< 1	0.023	0.008	0.039	5.6				clear	93	2			123
Lee	Rooves Beg	08-Apr-09		10.3	11.3	7.8	1	0.02	0.007	0.015					clear	103	1			130

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Parameter	Conductivity	Dissolved O <sub>2</sub>	Temperature	Dissolved O <sub>2</sub>	Molybdate P	pH	Nitrite	Ammonium	Nitrate	Chlorophyll	Total Phos	Alkalinity	Hardness	Secchi Disk	Colour	Chloride		
		O <sub>2</sub>		% O <sub>2</sub>	P		NO <sub>2</sub>	NH <sub>4</sub>	NO <sub>3</sub>		P	CaCO <sub>3</sub>	CaCO <sub>3</sub>		Hz	Cl		
Max.	--	15	--	150	--	9	0.05	--	--	25	--	--	--	--	--	--		
Target	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Min.	--	5	--	50	--	6	--	--	--	--	--	--	--	0.25	--	--		
Project	Sample Date	Comments	µS/cm	mg/l	Degrees C	% O <sub>2</sub>	mg/l	pH units	mg/l	mg/l	mg/l	mg/m <sup>3</sup>	mg/l	mg/l	mg/l	m	Hazen	mg/l
Inniscarra	08-Aug-07		118	10.5	19.3	111.8	< 0.006	7.9	0.033	< 0.026	3.55	<b>29</b>	36	53	1.7	64		
Inniscarra	30-Aug-07		121	9.5	19.1	100	< 0.006	7.9	0.039	0.043	3.85	<b>42.4</b>	0.013	36	62	2.5	63	
Inniscarra	20-Sep-07		131	9.4	14.5	100.4	< 0.006	7.6	<b>0.087</b>	0.104		12.1	0.013	36	65	2.5		
Inniscarra	17-Oct-07		126	9.1	15.1	89.3	< 0.006	7.6	0.04	0.056		17.3	0.014	36	45	2.48	34	
Inniscarra	14-Nov-07		125	9.3	11.6	85	0.006	7.8	<b>0.059</b>	0.056	4.23	12.9	0.014	36	36	3.1	50	
Inniscarra	10-Dec-07		111	10.7	8.7	93		7.5		0.057		0.042	28	39	1	88		
Inniscarra	16-Jan-08		117	11.1	7.1	94.9	< 0.023	7.3	0.018	0.059	8.26		36	54	1.5	76		
Inniscarra	21-Feb-08		136	10.7	8.1	91.5	0.011	7.6	0.02	0.065	8.57		36	48	2.7	49		
Inniscarra	27-Mar-08		140	12.3	9.8	110	< 0.006	8	0.013	< 0.026	6.97	0.022	34	55	2.2	47		
Inniscarra	29-Apr-08		142	11	10.7	102.4	< 0.006	7.8		< 0.026	7.06	14.1	0.016	46	47	2.1		
Inniscarra	27-May-08		136	10.1	16	103	< 0.006	7.7	0.03	0.08	5.11	20.8	0.016	24	54	2.1		
Inniscarra	25-Jun-08		133	9.6	16.8	99.7	< 0.006	7.7	<b>0.071</b>	0.026	4.53	18.9	0.025	60	49	2		
Inniscarra	29-Jul-08	[Chloride; 13.06mg/l 08/08/2008 16:18.]	117	9.5	18.9	106.5	0.012	7.9	0.04	0.053	4.13	<b>59</b>	0.018	36	40	1.9		
Inniscarra	27-Aug-08		108	9.4	19.1	100.4	0.009	7.6	0.025	0.042	4.13	16.3	0.021	42	38		84	
Inniscarra	18-Sep-08		116	10.7	15.2	106.1	0.007	7.7			5.2	<b>71.4</b>	0.042	38	42	1.7	85	
Inniscarra	16-Oct-08		95	8.6	13	82.4	< 0.006	7.3	0.02	0.039	3.15	5.8	0.018	28	30		77	
Inniscarra	19-Nov-08	Surface water	114	10.6	9.1	91.3	0.012	7.6	0.017	0.044	5.73	1.6	0.021	36	42	2.5	43	12.2
Inniscarra	03-Dec-08		125	10.6	6.9	89	0.013	7.6	0.024	0.074	6.13	2.1	0.013	42	42	3	45	11.9

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Parameter	Conductivi	Dissolved	Temperatu	Dissolved	Molybdate	pH	Nitrite	Ammonium	Nitrate	Chlorophy	Total Phos	Alkalinity	Hardness	Sechi Disk	Colour	Silica	Chloride		
	µS/cm	O2	Degrees C	% O2	P		NO2	NH4	NO3		P	CaCO3	CaCO3		Hz	SiO2	Cl		
Max.	--	15	--	150	--	9	0.05	--	--	25	--	--	--	--	--	--	--		
Target	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Min.	--	5	--	50	--	6	--	--	--	--	--	--	--	0.25	--	--	--		
Project	Sample Date	Comments	µS/cm	mg/l	Degrees C	% O2	mg/l	pH units	mg/l	mg/l	mg/l	mg/m3	mg/l	mg/l	mg/l	m	Hazen	mg/l	mg/l
Inniscarra	08-Aug-07		116	8.6	18.3	91.5	< 0.006	7.7	0.026	0.054	3.34	8.4	38	46	1.2	57			
Inniscarra	30-Aug-07		116	8.6	17.5	88	< 0.006	7.8	0.023	0.032	2.93	12.9	36	62	1.9	60			
Inniscarra	20-Sep-07		133	8.7	17.2	91.1	0.007	7.6	0.036	0.086		1.2	0.014	42	69	1.7			
Inniscarra	17-Oct-07		128	8.6	13.9	84.6	0.006	7.5	0.043	0.112		3.8	0.016	40	46	0.5	33		
Inniscarra	14-Nov-07		110	9	10.7	85	0.008	8.1	0.037	0.089	3.59	5.3	0.013	32	39	2.1	71		
Inniscarra	10-Dec-07		111	10.7	8.1	91	0.029	7.7	< 0.013	0.086	7.2		0.045	24	38	1.1	95		
Inniscarra	16-Jan-08		115	11.1	7	94.3	< 0.016	7.4	0.019	0.075	7.37		26	49	1.3	58			
Inniscarra	21-Feb-08		140	11.2	7.9	94	0.011	7.7	0.023	0.093	9.33		34	50	1.5	45			
Inniscarra	27-Mar-08		142	12.6	8.4	109.3	< 0.006	8	0.013	< 0.026	6.8		0.017	40	47	1.1	43		
Inniscarra	29-Apr-08		146	11	11.2	104	< 0.006	7.9		< 0.026	9.42	14.9	0.016	44	51	1.6			
Inniscarra	27-May-08		126	9.4	14.6	93	0.007	7.5	0.035	0.139	4.19	6.4	0.016	62	52	1.6			
Inniscarra	25-Jun-08		130	10.7	16.7	110	0.006	7.5	0.04	0.033	3.59	17.1	0.016	46	57	1.9			
Inniscarra	29-Jul-08	[Chloride; 13.22mg/l 08/08/2008 16:18.]	125	9.1	19	98.7	< 0.006	7.7	0.03	0.082	4.01	11.7	0.014	42	46	1.2			
Inniscarra	27-Aug-08		106	8.6	17.5	88.3	0.008	7.8	0.026	0.079	3.99	11.8	0.019	32	41		82		
Inniscarra	18-Sep-08		114	8.8	13.9	85.8	0.01	7.3			4.93	6.2	0.017	36	52	1.6	56		
Inniscarra	16-Oct-08		96	9.1	12.9	86.5	0.007	7.3	0.019	0.056	3.17	6.2	0.028	32	32		80		
Inniscarra	19-Nov-08	Surface water	120	10.8	9.5	94.2	0.01	7.9	0.02	0.046	5.91	1.6	< 0.01	38	46	1	37	1.42	12.5
Inniscarra	03-Dec-08		121	11	6.2	89.5	0.011	7.6	0.02	0.041	5.42	2	0.016	44	41	0.3	47	1.4	11.9

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Project	Project Re	Location	Sample Date	Comments	Parameter	Nitrite	Molybdate	Ammonium	Nitrate
						NO2	P	NH4	NO3
					Max.	0.05	Varies	Varies	Varies
					Target	--	--	--	--
					Min.	--	--	--	--
					mg/l	mg/l	mg/l	mg/l	
Lee		Ang.Rest.Br	09-Jan-07	T.P.<0.02	0.033	0.023	0.079	11.2	
Lee		Inniscarra	09-Jan-07		0.032	0.021	0.103	10.8	
Lee		Co.Corp.Int	09-Jan-07		0.037	0.029	0.085	13.7	
Lee		Carrigadrohid	09-Jan-07		0.021	0.016	0.06	8.6	
Lee		Inchigeelagh Br.	09-Jan-07		< 0.013	0.007	0.047	3.4	
Lee		Dromcarra B	09-Jan-07		< 0.013	0.009	0.062	5	
Lee		Bealahaglashin Br.	09-Jan-07		0.016	0.014	0.049	6	
Lee		Rooves Beg	09-Jan-07		0.022	0.018	0.094	8.7	
Lee		Inch/sig Br	09-Jan-07		< 0.013	< 0.006	< 0.026	2.3	
Lee		Bealahaglashin Br.	17-Jan-07		0.032	0.01	0.04	6.9	
Lee		Inchigeelagh Br.	17-Jan-07		< 0.013	0.006	0.032	2.9	
Lee		Rooves Beg	17-Jan-07		0.023	0.014	0.041	9.9	
Lee		Ang.Rest.Br	17-Jan-07		0.041	0.024	0.057	11.5	
Lee		Inniscarra	17-Jan-07		0.035	0.022	0.062	11.5	
Lee		Dromcarra B	17-Jan-07		0.014	0.009	0.026	4.8	
Lee		Carrigadrohid	17-Jan-07		0.024	0.013	0.046	8.8	
Lee		Co.Corp.Int	17-Jan-07		<b>0.059</b>	0.029	0.103	13.6	
Lee		Inch/sig Br	17-Jan-07		< 0.013	< 0.006	< 0.026	2	
Lee		Inch/sig Br	08-Feb-07		0.021	0.008	0.069		
Lee		Ang.Rest.Br	08-Feb-07		<b>0.078</b>	0.176	0.435		
Lee		Dromcarra B	08-Feb-07		0.014	0.014	0.093		
Lee		Rooves Beg	08-Feb-07		0.029	0.013	0.07		
Lee		Inniscarra	08-Feb-07		<b>0.059</b>	<b>0.14</b>	0.314		
Lee		Inchigeelagh Br.	08-Feb-07		< 0.013	0.006	0.038		
Lee		Co.Corp.Int	08-Feb-07		<b>0.08</b>	<b>0.166</b>	<b>0.533</b>		
Lee		Carrigadrohid	08-Feb-07		0.025	0.012	0.052		
Lee		Bealahaglashin Br.	08-Feb-07		< 0.013	< 0.006	< 0.026		
Lee		Ang.Rest.Br	15-Mar-07		0.035	0.022	0.066	9.2	
Lee		Carrigadrohid	15-Mar-07		0.024	0.018	0.057		
Lee		Inniscarra	15-Mar-07		0.03	0.021	0.058		
Lee		Dromcarra B	15-Mar-07		< 0.013	< 0.006	0.027		
Lee		Inchigeelagh Br.	15-Mar-07		< 0.013	< 0.006	0.03		
Lee		Inch/sig Br	15-Mar-07		< 0.013	< 0.006	< 0.026	2.5	
Lee		Co.Corp.Int	15-Mar-07		0.035	0.022	0.061		
Lee		Inchigeelagh Br.	15-Mar-07		< 0.013	< 0.006	0.026	2.5	
Lee		Bealahaglashin Br.	15-Mar-07		0.016	< 0.006	0.038		
Lee		Rooves Beg	15-Mar-07		0.029	0.019	0.067		
Lee		Bealahaglashin Br.	18-Apr-07		<b>0.058</b>	< 0.006	0.076	7	
Lee		Carrigadrohid	18-Apr-07		0.04	< 0.006	0.034	8.9	
Lee		Ang.Rest.Br	18-Apr-07		0.028	0.01	0.026	11.6	
Lee		Inch/sig Br	18-Apr-07		< 0.013	< 0.006	< 0.026	2.4	
Lee		Inniscarra	18-Apr-07		0.024	0.007	0.035	11.2	
Lee		Rooves Beg	18-Apr-07		0.025	< 0.006	< 0.026	9.8	
Lee		Dromcarra B	18-Apr-07		0.015	< 0.006	< 0.026	3.8	
Lee		Co.Corp.Int	18-Apr-07		0.039	0.017	0.042	15.4	
Lee		Inchigeelagh Br.	18-Apr-07		< 0.013	< 0.006	0.026	2.6	
Lee		Co.Corp.Int	09-May-07		<b>0.092</b>	<b>0.036</b>	0.034		
Lee		Bealahaglashin Br.	09-May-07		<b>0.052</b>	< 0.006	0.119		
Lee		Dromcarra B	09-May-07		< 0.013	< 0.006	< 0.026		
Lee		Carrigadrohid	09-May-07		<b>0.056</b>	< 0.006	0.062		
Lee		Inchigeelagh Br.	09-May-07		< 0.013	< 0.006	< 0.026		
Lee		Ang.Rest.Br	09-May-07		<b>0.064</b>	< 0.006	0.048		
Lee		Rooves Beg	09-May-07		0.038	< 0.006	0.038		
Lee		Inniscarra	09-May-07		<b>0.063</b>	0.016	0.032		
Lee		Inch/sig Br	09-May-07		< 0.013	< 0.006	< 0.026	< 1.8	
Lee		Ang.Rest.Br	13-Jun-07		0.039	0.011	< 0.026	11.2	
Lee		Dromcarra B	13-Jun-07		< 0.013	< 0.006	0.029		
Lee		Inch/sig Br	13-Jun-07		< 0.013	< 0.006	< 0.026	2.1	

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Lee	Foot Br. Castlemasters	13-Jun-07	< 0.013	< 0.006	< 0.026	2.9
Lee	Rooves Beg	13-Jun-07	0.043	< 0.006	0.039	
Lee	Inchigeelagh Br.	13-Jun-07	< 0.013	< 0.006	< 0.026	
Lee	Inniscarra	13-Jun-07	0.045	< 0.006	< 0.026	10.9
Lee	Bealahaglashin Br.	13-Jun-07	0.049	< 0.006	0.066	
Lee	Co.Corp.Int	13-Jun-07	<b>0.088</b>	<b>0.045</b>	0.048	
Lee	Co.Corp.Int	11-Jul-07	<b>0.08</b>	0.016	0.034	9.6
Lee	Bealahaglashin Br.	11-Jul-07	0.014	< 0.006	< 0.026	
Lee	Carrigadrohid	11-Jul-07	0.026	< 0.006	< 0.026	
Lee	Rooves Beg	11-Jul-07	0.039	< 0.006	0.039	
Lee	Inch/sig Br	11-Jul-07	< 0.013	< 0.006	< 0.026	1.8
Lee	Inniscarra	11-Jul-07	<b>0.113</b>	0.008	0.04	7.3
Lee	Ang.Rest.Br	11-Jul-07	<b>0.094</b>	0.022	0.03	7.9
Lee	Foot Br. Castlemasters	11-Jul-07	< 0.013	0.007	0.139	< 1.8
Lee	Dromcarra B	11-Jul-07	< 0.013	0.006	< 0.026	
Lee	Rooves Beg	07-Aug-07	0.035	0.008	< 0.026	3.5
Lee	Inch/sig Br	07-Aug-07	< 0.013	< 0.01	0.04	< 2
Lee	Bealahaglashin Br.	07-Aug-07	0.02	< 0.006	< 0.026	2.9
Lee	Co.Corp.Int	07-Aug-07	0.042	0.021	0.026	13.6
Lee	Inniscarra	07-Aug-07	<b>0.068</b>	0.022	0.044	8.3
Lee	Ang.Rest.Br	07-Aug-07	<b>0.06</b>	0.018	0.026	9.5
Lee	Dromcarra B	07-Aug-07	< 0.013	< 0.006	< 0.026	< 2
Lee	Foot Br. Castlemasters	07-Aug-07	0.014	< 0.006	0.039	< 1.8
Lee	Carrigadrohid	07-Aug-07	0.029	< 0.006	< 0.026	3.1
Lee	Dromcarra B	20-Sep-07	< 0.013	< 0.006	0.045	
Lee	Inch/sig Br	20-Sep-07	< 0.013	< 0.006	< 0.026	
Lee	Foot Br. Castlemasters	20-Sep-07	< 0.013	< 0.006	< 0.026	
Lee	Bealahaglashin Br.	20-Sep-07	<b>0.063</b>	< 0.006	0.033	
Lee	Co.Corp.Int	20-Sep-07	0.043	0.033	< 0.026	
Lee	Inchigeelagh Br.	20-Sep-07	< 0.013	< 0.006	< 0.026	
Lee	Inniscarra	20-Sep-07	<b>0.088</b>	< 0.006	0.036	
Lee	Ang.Rest.Br	20-Sep-07	0.041	0.017	< 0.026	
Lee	Rooves Beg	20-Sep-07	<b>0.074</b>	< 0.006	0.073	
Lee	Ang.Rest.Br	10-Oct-07	0.034	0.039	0.026	8.8
Lee	Inniscarra	10-Oct-07	0.049	0.01	0.036	6
Lee	Rooves Beg	10-Oct-07	0.043	< 0.006	< 0.026	
Lee	Bealahaglashin Br.	10-Oct-07	0.022	0.007	0.093	
Lee	Inchigeelagh Br.	10-Oct-07	< 0.013	< 0.006	0.034	< 2
Lee	Foot Br. Castlemasters	10-Oct-07	< 0.013	< 0.006	0.052	
Lee	Co.Corp.Int	10-Oct-07	0.03	0.028	0.049	
Lee	Dromcarra B	10-Oct-07	< 0.013	< 0.006	0.05	
Lee	Inch/sig Br	10-Oct-07	< 0.013	0.007	< 0.026	4
Lee	Inniscarra	24-Oct-07 GR1016	0.028	0.015	< 0.026	7.3
Lee	Ang.Rest.Br	25-Oct-07 GR1017	0.031	0.014	< 0.026	7.2
Lee	Ang.Rest.Br	15-Nov-07	0.035	0.016	< 0.026	6.6
Lee	Inniscarra	15-Nov-07	0.047	0.009	< 0.026	6.2
Lee	Foot Br. Castlemasters	15-Nov-07	0.024	< 0.006	0.07	< 1.8
Lee	Dromcarra B	15-Nov-07	0.015	0.006	0.031	2.8
Lee	Inch/sig Br	15-Nov-07	< 0.013	< 0.006	< 0.026	2
Lee	Inchigeelagh Br.	15-Nov-07	0.015	< 0.006	0.094	< 2
Lee	Rooves Beg	15-Nov-07	<b>0.051</b>	0.008	0.076	4.3
Lee	Co.Corp.Int	15-Nov-07	0.031	<b>0.045</b>	0.037	9.3
Lee	Bealahaglashin Br.	15-Nov-07	<b>0.056</b>	< 0.006	0.123	3.8
Lee	Ang.Rest.Br	12-Dec-07 t.cliform=1	0.037	0.023	0.069	8.2
Lee	Dromcarra B	12-Dec-07	0.018	0.009	0.071	
Lee	Inch/sig Br	12-Dec-07	< 0.013	< 0.006	0.026	< 1.8
Lee	Co.Corp.Int	12-Dec-07	0.039	0.021	0.092	
Lee	Inniscarra	12-Dec-07	0.038	0.02	0.07	10.1
Lee	Inchigeelagh Br.	12-Dec-07	0.014	0.009	0.087	
Lee	Rooves Beg	12-Dec-07	0.025	0.018	0.053	
Lee	Foot Br. Castlemasters	12-Dec-07	0.015	0.006	0.055	3.2
Lee	Bealahaglashin Br.	12-Dec-07	0.027	< 0.006	0.086	5.8
Lee	Bealahaglashin Br.	21-Feb-08	0.019	0.009	0.078	9.1
Lee	Inniscarra	21-Feb-08	0.029	0.017	0.069	13.8



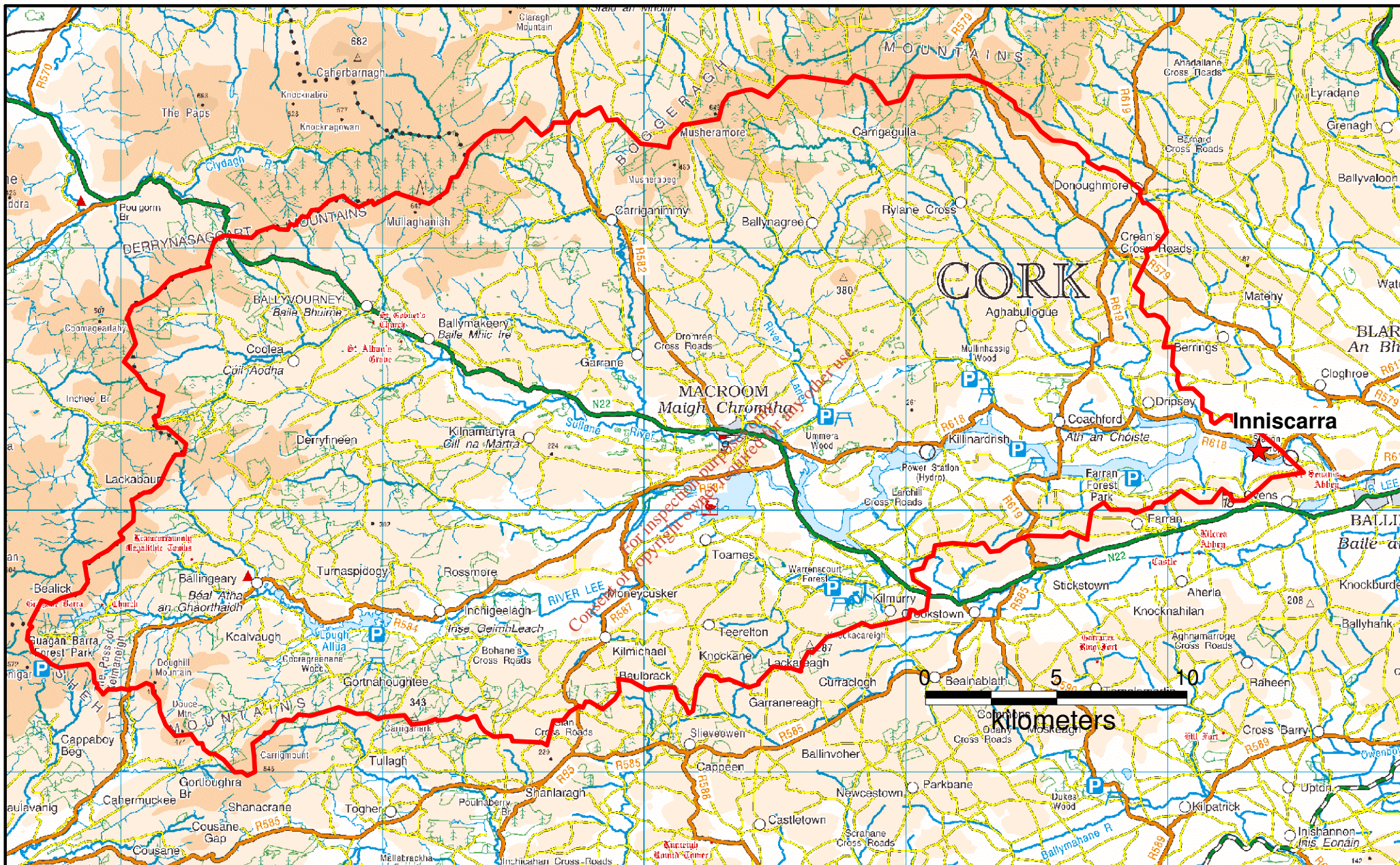
Lee	Inchigeelagh Br.	21-Feb-08	< 0.013	< 0.006	0.068	3.3
Lee	Rooves Beg	21-Feb-08	0.022	0.014	0.101	8.9
Lee	Dromcarra B	21-Feb-08	< 0.013	0.007	0.063	5.6
Lee	Co.Corp.Int	21-Feb-08	0.031	0.031	0.072	16.6
Lee	Bealahaglashin Br.	12-Mar-08	< 0.013	< 0.006	0.027	4.1
Lee	Foot Br. Castlemasters	12-Mar-08	< 0.013	< 0.006	0.026	2.8
Lee	Dromcarra B	12-Mar-08	< 0.013	< 0.006	0.05	3.5
Lee	Inchigeelagh Br.	12-Mar-08	< 0.013	< 0.006	0.034	2.8
Lee	Inniscarra	12-Mar-08	0.024	0.013	0.085	12
Lee	Rooves Beg	12-Mar-08	0.015	< 0.006	0.027	8.1
Lee	Co.Corp.Int	12-Mar-08	0.025	0.017	0.034	12.9
Lee	Inniscarra	10-Apr-08	0.022	< 0.006	< 0.026	3
Lee	Inchigeelagh Br.	10-Apr-08	< 0.013	< 0.006	< 0.026	
Lee	Bealahaglashin Br.	10-Apr-08	0.015	< 0.006	< 0.026	
Lee	Dromcarra B	10-Apr-08	0.013	< 0.006	< 0.026	
Lee	Co.Corp.Int	10-Apr-08	0.024	0.009	0.053	
Lee	Rooves Beg	10-Apr-08	0.017	< 0.006	< 0.026	
Lee	Rooves Beg	14-May-08	< 0.013	< 0.006	0.045	
Lee	Inniscarra	14-May-08	< 0.013	< 0.006	0.027	11.5
Lee	Co.Corp.Int	14-May-08	0.015	0.02	0.036	
Lee	Carrigadrohid	14-May-08	< 0.013	< 0.006	0.044	
Lee	Foot Br. Castlemasters	14-May-08	< 0.013	< 0.006	< 0.026	2.9
Lee	Dromcarra B	14-May-08	< 0.013	< 0.006	< 0.026	
Lee	Bealahaglashin Br.	14-May-08	< 0.013	< 0.006	0.083	
Lee	Inchigeelagh Br.	14-May-08	< 0.013	< 0.006	< 0.026	
Lee	Rooves Beg	11-Jun-08	0.045	< 0.006	0.031	
Lee	Carrigadrohid	11-Jun-08	0.036	< 0.006	0.093	
Lee	Inniscarra	11-Jun-08	<b>0.175</b>	0.008	0.027	9.9
Lee	Inchigeelagh Br.	11-Jun-08	< 0.013	< 0.006	0.068	
Lee	Dromcarra B	11-Jun-08	0.015	< 0.006	0.037	
Lee	Co.Corp.Int	11-Jun-08	<b>0.112</b>	<b>0.036</b>	0.055	
Lee	Bealahaglashin Br.	11-Jun-08	0.036	< 0.006	0.046	
Lee	Dromcarra B	09-Jul-08	0.015	< 0.006	< 0.026	
Lee	Inchigeelagh Br.	09-Jul-08	< 0.013	< 0.006	0.033	
Lee	Bealahaglashin Br.	09-Jul-08	0.019	< 0.006	0.034	
Lee	Carrigadrohid	09-Jul-08	0.027	0.013	0.063	
Lee	Inniscarra	09-Jul-08	0.05	0.018	0.059	10.1
Lee	Co.Corp.Int	09-Jul-08	0.047	0.035	0.04	
Lee	Rooves Beg	09-Jul-08	0.03	< 0.006	0.062	
Lee	Carrigadrohid	13-Aug-08	0.035	0.007	0.075	4.5
Lee	Rooves Beg	13-Aug-08	0.034	0.008	0.081	4.9
Lee	Bealahaglashin Br.	13-Aug-08	0.023	0.009	0.045	3.2
Lee	Inniscarra	13-Aug-08	0.049	0.021	0.107	9.2
Lee	Inchigeelagh Br.	13-Aug-08	0.016	0.006	0.034	< 2
Lee	Foot Br. Castlemasters	13-Aug-08	0.015	0.006	0.044	< 1.8
Lee	Dromcarra B	13-Aug-08	0.017	0.008	0.065	< 2
Lee	Co.Corp.Int	13-Aug-08	<b>0.051</b>	<b>0.04</b>	0.095	12.2
Lee	Dromcarra B	10-Sep-08	0.014	0.007	0.031	
Lee	Rooves Beg	10-Sep-08	0.027	0.014	0.061	
Lee	Bealahaglashin Br.	10-Sep-08	0.024	0.009	0.073	
Lee	Co.Corp.Int	10-Sep-08	0.043	0.021	0.041	
Lee	Carrigadrohid	10-Sep-08	0.026	0.012	0.069	
Lee	Inniscarra	10-Sep-08	0.047	0.015	0.083	7.6
Lee	Inchigeelagh Br.	10-Sep-08	0.014	< 0.006	0.035	
Lee	Co.Corp.Int	08-Oct-08	0.039	0.028	< 0.026	
Lee	Rooves Beg	08-Oct-08	0.028	0.006	0.058	
Lee	Inch/sig Br	08-Oct-08	< 0.013	< 0.006	< 0.026	
Lee	Inchigeelagh Br.	08-Oct-08	< 0.013	< 0.006	0.064	
Lee	Foot Br. Castlemasters	08-Oct-08	< 0.013	< 0.006	0.06	< 1.8
Lee	Carrigadrohid	08-Oct-08	0.028	< 0.006	0.033	
Lee	Inniscarra	08-Oct-08	0.046	0.014	0.035	9.4
Lee	Bealahaglashin Br.	08-Oct-08	0.02	< 0.006	< 0.026	
Lee	Dromcarra B	08-Oct-08	< 0.013	< 0.006	< 0.026	
Lee	Inchigeelagh Br.	12-Nov-08	< 0.013	< 0.006	0.04	

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Lee	Carrigadrohid	12-Nov-08	0.017	0.025	0.056	
Lee	Dromcarra B	12-Nov-08	< 0.013	< 0.006	0.042	
Lee	Inniscarra	12-Nov-08	0.025	0.018	0.084	7
Lee	Rooves Beg	12-Nov-08	0.021	0.014	0.041	
Lee	Bealahaglashin Br.	12-Nov-08	0.015	< 0.006	0.028	
Lee	Co.Corp.Int	12-Nov-08	0.024	0.016	0.034	
Lee	Inchigeelagh Br.	10-Dec-08	< 0.013	0.006	0.047	
Lee	Rooves Beg	10-Dec-08	0.03	0.016	0.061	
Lee	Inniscarra	10-Dec-08	0.03	0.019	0.045	
Lee	Co.Corp.Int	10-Dec-08	0.031	0.025	0.056	
Lee	Dromcarra B	10-Dec-08	0.013	0.007	0.031	
Lee	Bealahaglashin Br.	10-Dec-08	0.099	0.009	0.027	
Lee	Carrigadrohid	10-Dec-08	0.024	0.013	0.049	
Lee	Inchigeelagh Br.	15-Jan-09	0.014	0.012	0.048	
Lee	Rooves Beg	15-Jan-09	0.029	0.021	0.072	
Lee	Co.Corp.Int	15-Jan-09	0.033	0.032	0.09	
Lee	Dromcarra B	15-Jan-09	< 0.013	0.01	0.034	
Lee	Inniscarra	15-Jan-09	0.027	0.021	0.069	7.6
Lee	Bealahaglashin Br.	15-Jan-09	0.021	0.013	0.051	
Lee	Foot Br. Castlemasters	15-Jan-09	< 0.013	0.01	0.042	2.3
Lee	Carrigadrohid	15-Jan-09	0.022	0.017	0.068	
Lee	Inchigeelagh Br.	11-Feb-09	< 0.013	< 0.006	0.026	
Lee	Rooves Beg	11-Feb-09	0.017	0.012	0.061	
Lee	Inniscarra	11-Feb-09				
Lee	Carrigadrohid	11-Feb-09	0.015	0.012	0.033	
Lee	Dromcarra B	11-Feb-09	< 0.013	0.007	0.008	
Lee	Bealahaglashin Br.	11-Feb-09	0.013	0.006	0.02	
Lee	Co.Corp.Int	11-Feb-09	0.035	0.028	0.035	
Lee	Inchigeelagh Br.	12-Mar-09	< 0.013	< 0.006	0.029	2
Lee	Co.Corp.Int	12-Mar-09	0.024	0.019	0.016	13.8
Lee	Carrigadrohid	12-Mar-09	0.019	0.007	0.056	4.2
Lee	Rooves Beg	12-Mar-09	0.023	0.008	0.039	5.6
Lee	Dromcarra B	12-Mar-09	< 0.013	< 0.006	0.006	2.7
Lee	Inniscarra	12-Mar-09	0.023	0.009	0.021	10.1
Lee	Bealahaglashin Br.	12-Mar-09	0.014	< 0.006	0.011	3.3
Lee	Inchigeelagh Br.	08-Apr-09	< 0.013	< 0.006	0.006	
Lee	Bealahaglashin Br.	08-Apr-09	0.013	< 0.006	0.032	
Lee	Dromcarra B	08-Apr-09	< 0.013	< 0.006	0.01	
Lee	Foot Br. Castlemasters	08-Apr-09	< 0.013	< 0.006	0.01	< 1.8
Lee	Co.Corp.Int	08-Apr-09	0.038	0.028	0.142	
Lee	Rooves Beg	08-Apr-09	0.02	0.007	0.015	
Lee	Carrigadrohid	08-Apr-09	0.019	< 0.006	0.011	
Lee	Inniscarra	08-Apr-09	0.046	0.021	0.093	11.3

Rep. No. 318/09

				Parameter	Nitrite	Molybdate P	Ammonium	Nitrate
					NO2	P	NH4	NO3
				Max.	0.05	Varies	0.5	25
				Target	--	--	--	--
				Min.	--	--	--	--
Project	Project Re	Location	Sample Date	Comments	mg/l	mg/l	mg/l	mg/l
Lee		Inniscarra	09-Jan-07		0.032	0.021	0.103	10.8
Lee		Inniscarra	17-Jan-07		0.035	0.022	0.062	11.5
Lee		Inniscarra	08-Feb-07		<b>0.059</b>	<b>0.14</b>	0.314	
Lee		Inniscarra	15-Mar-07		0.03	0.021	0.058	
Lee		Inniscarra	18-Apr-07		0.024	0.007	0.035	11.2
Lee		Inniscarra	09-May-07		<b>0.063</b>	0.016	0.032	
Lee		Inniscarra	13-Jun-07		0.045	< 0.006	< 0.026	10.9
Lee		Inniscarra	11-Jul-07		<b>0.113</b>	0.008	0.04	7.3
Lee		Inniscarra	07-Aug-07		<b>0.068</b>	0.022	0.044	8.3
Lee		Inniscarra	20-Sep-07		<b>0.088</b>	< 0.006	0.036	
Lee		Inniscarra	10-Oct-07		0.049	0.01	0.036	6
Lee		Inniscarra	24-Oct-07	GR1016	0.028	0.015	< 0.026	7.3
Lee		Inniscarra	15-Nov-07		0.047	0.009	< 0.026	6.2
Lee		Inniscarra	12-Dec-07		0.038	0.02	0.07	10.1
Lee		Inniscarra	21-Feb-08		0.029	0.017	0.069	13.8
Lee		Inniscarra	12-Mar-08		0.024	0.013	0.085	12
Lee		Inniscarra	10-Apr-08		0.022	< 0.006	< 0.026	3
Lee		Inniscarra	14-May-08		< 0.013	< 0.006	0.027	11.5
Lee		Inniscarra	11-Jun-08		<b>0.175</b>	0.008	0.027	9.9
Lee		Inniscarra	09-Jul-08		0.05	0.018	0.059	10.1
Lee		Inniscarra	13-Aug-08		0.049	0.021	0.107	9.2
Lee		Inniscarra	10-Sep-08		0.047	0.015	0.083	7.6
Lee		Inniscarra	08-Oct-08		0.046	0.014	0.035	9.4
Lee		Inniscarra	12-Nov-08		0.025	0.018	0.084	7
Lee		Inniscarra	10-Dec-08		0.03	0.019	0.045	
Lee		Inniscarra	15-Jan-09		0.027	0.021	0.069	7.6
Lee		Inniscarra	11-Feb-09					
Lee		Inniscarra	12-Mar-09		0.023	0.009	0.021	10.1
Lee		Inniscarra	08-Apr-09		0.046	0.021	0.093	11.3



**Inniscarra Water Supply, Catchment Outline**

- ★ Abstraction Location
- Catchment Outline



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A Century of Service

Cork County Council  
Environmental Directorate  
Inniscarra  
Co. Cork  
Phone: 021-4532700  
Fax No. 021-4532777

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## SURFACE WATER - Introduction

Scores should be inserted (where appropriate) into the blue boxes in Sections 1 to 10. The scores for each section will be automatically totalled (in the yellow box) and a summary of the scores for each section will appear on this sheet. The section scores will be totalled automatically on this summary sheet. The population of supply should be entered into the blue box below on this page and the overall Cryptosporidium Risk Assessment Score will be automatically calculated for the supply.

### Cork Harbour and City Water Supply Scheme at Inniscarra Waterworks

22/02/2008

Surface Water Catchment Risk Scores	Section Score	Total Score
Section 1 - Animals within the Catchment	(10+5+0+2+4)	21
Section 2 - Agricultural Practices within the Catchment	(6+3+3+6+8)	26
Section 3 - Discharges to the Catchment/Water Source	(6+6+2)	14
Section 4 - Water Source Type	4	4
Section 5 - Catchment Inspections	(-3-3)	-6
Section 6 - Raw Water Intake Management for Abstractions	(-2-4)	-6
<b>Total Surface Water Catchment Risk Score</b>		<b>53</b>

### Surface Water - Treatment and Supply Risk Score

Section 7 - Water Treatment Processes	-10	-10
Section 8a - Treatment Works Monitoring of Coagulation and Filtration	-5	-5
Section 8b - Treatment Works Monitoring of Coagulation and Filtration	-1	-1
Section 8c - Treatment Works Monitoring of Coagulation and Filtration	(-5-2+5-2)	-4
Section 8d - Treatment Works Monitoring of Coagulation and Filtration		
Section 8e - Treatment Works Monitoring of Coagulation and Filtration		
Section 8f - Treatment Works Monitoring of Coagulation and Filtration		
Section 9 - Rapid Gravity and Pressure Filter Works Performance	(0+6-2-2)	2
Section 10 - Treatment Works Operation	(-2+1-4+4-2+2+4)	3
<b>Total Surface Water - Treatment and Supply Risk Score</b>		<b>-15</b>

Surface Water Risk Assessment Score	<b>38</b>
Population	<b>111,000</b>
Population Weighting Factor (0.4 x log <sub>10</sub> (population))	2.018129192
<b>Final Weighted Risk Assessment Score</b>	<b>76.68890928</b>
<b>Water Supply Risk Classification</b>	<b>High Risk</b>

21/04/2008

Since the assessment was made the sand filters were upgraded and the media depth is now above the minimum design level. Therefore the scoring for Section 9 is now -6 resulting in an overall score of 60.54 and a risk classification of Moderate.

The new assessment reads as follows:

Surface Water Catchment Risk Scores	Section Score	Total Score
Section 1 - Animals within the Catchment	(10+5+0+2+4)	21
Section 2 - Agricultural Practices within the Catchment	(6+3+3+6+8)	26
Section 3 - Discharges to the Catchment/Water Source	(6+6+2)	14
Section 4 - Water Source Type	4	4
Section 5 - Catchment Inspections	(-3-3)	-6
Section 6 - Raw Water Intake Management for Abstractions	(-2-4)	-6
<b>Total Surface Water Catchment Risk Score</b>		<b>53</b>

**Surface Water - Treatment and Supply Risk Score**

Section 7 - Water Treatment Processes	0	-10
Section 8a - Treatment Works Monitoring of Coagulation and Filtration	5	-5
Section 8b - Treatment Works Monitoring of Coagulation and Filtration	-1	-1
Section 8c - Treatment Works Monitoring of Coagulation and Filtration	(-5-2+5-2)	-4
Section 8d - Treatment Works Monitoring of Coagulation and Filtration		
Section 8e - Treatment Works Monitoring of Coagulation and Filtration		
Section 8f - Treatment Works Monitoring of Coagulation and Filtration		
Section 9 - Rapid Gravity and Pressure Filter Works Performance	<b>(0-2-2-2)</b>	<b>-6</b>
Section 10 - Treatment Works Operation	(-2+1-4+4-2+2+4)	3
<b>Total Surface Water - Treatment and Supply Risk Score</b>		<b>-23</b>

Surface Water Risk Assessment Score	<b>30</b>
Population	111,000
Population Weighting Factor (0.4 x log10(population))	2.018129192
<b>Final Weighted Risk Assessment Score</b>	<b>60.54387575</b>
<b>Water Supply Risk Classification</b>	<b>Moderate</b>

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# Cork County

## Water Services Investment Programme 2007 - 2009

Schemes at Construction	W/S	Est. Cost	Schemes to start 2009 contd.	W/S	Est. Cost
<b>Cork North</b>			<b>Cork South</b>		
Mitchelstown Sewerage Scheme (Nutrient Removal)	S	221,000	Ballincollig Sewerage Scheme (Upgrade) (G)	S	22,248,000
<b>Cork South</b>			Cork Lower Harbour Sewerage Scheme (excl. Crosshaven SS)	S	73,542,000
Ballyvourney/ Ballymakeery Sewerage Scheme	S	3,049,000	Shannagarry/ Garryvoe/ Ballycotton Sewerage Scheme	S	3,780,000
Cobh/ Midleton/ Carrigtwohill Water Supply Scheme	W	10,135,000	Youghal Sewerage Scheme	S	14,420,000
Cork Lower Harbour Sewerage Scheme (Crosshaven SS) (G)	S	4,850,000	<b>Cork West</b>		
Cork Water Strategy Study (G)	W	941,000	Ballydehob Sewerage Scheme	S	683,000
Kinsale Sewerage Scheme	S	20,000,000	Bantry Water Supply Scheme	W	14,935,000
Midleton Sewerage Scheme (Infiltration Reduction) (G)	S	2,078,000	Clonakilty Sewerage Scheme (Plant Capacity Increase)	S	3,677,000
		<b>41,274,000</b>	Courtmacsherry/ Timoleague Sewerage Scheme	S	2,472,000
<b>Schemes to start 2007</b>			Dunmanway Regional Water Supply Scheme Stage 1	W	12,669,000
					<b>164,629,000</b>
<b>Cork North</b>			<b>Serviced Land Initiative</b>		
North Cork Grouped DBO Wastewater Treatment Plant (Buttevant, Doneraile & Kilbrin)	S	5,150,000	<b>Cork North</b>		
<b>Cork West</b>			Ballycough Water Supply Scheme	W	139,000
Skibbereen Sewerage Scheme	S	20,000,000	Ballyhooley Improvement Scheme	W/S	139,000
		<b>25,150,000</b>	Broghill-Rathgoggin Sewerage Scheme	S	406,000
<b>Schemes to start 2008</b>			Bweang Water Supply Scheme	W	115,000
<b>Cork North</b>			Churchtown Sewerage Scheme (incl. Water)	W/S	543,000
Mallow/ Ballyvinter Regional Water Supply Scheme (H) W		8,662,000	Clondulane Sewage Treatment Plant	S	417,000
Mallow Sewerage Scheme (H)	S	3,408,000	Freemount Sewerage Scheme	S	150,000
<b>Cork South</b>			Pike Road Sewerage Scheme (incl. Water)	W/S	2,080,000
Ballincollig Sewerage Scheme (Nutrient Removal) (G)	S	948,000	Rathcormac Sewerage Scheme (incl. Water)	W/S	555,000
Ballingeary Sewerage Scheme	S	1,296,000	Spa Glen Sewerage Scheme	S	736,000
Bandon Sewerage Scheme Stage 2	S	14,729,000	Uplands Fermoy Sewerage Scheme (incl. Water)	W/S	1,174,000
City Environs (CASP) Strategic Study (G)	S	153,000	Watergrasshill Water Supply Scheme (incl. Sewerage) (G)	W/S	4,151,000
Cloghroe Sewerage Scheme (Upgrade)	S	683,000	<b>Cork South</b>		
Coachford Water Supply Scheme	W	1,318,000	Ballincollig Sewerage Scheme (Barry's Rd Foul and Storm Drainage) (G)	S	1,164,000
Garretstown Sewerage Scheme	S	2,153,000	Belgooley, Water Supply Scheme (incl. Sewerage)	W/S	2,913,000
Inniscarra Water Treatment Plant Extension Phase 1	W	2,678,000	Blarney Water Supply Scheme (Ext. to Station Rd) (G)	W	416,000
Little Island Sewerage Scheme (G)	S	2,200,000	Carrigtwohill Sewerage Scheme (Treatment and Storm Drain) (G)	S	7,632,000
<b>Cork West</b>			Castlematyr Wastewater Treatment Plant Extension	S	1,200,000
Bantry Sewerage Scheme	S	7,148,000	Crookstown Sewerage Scheme (incl. Water)	W/S	1,200,000
Dunmanway Sewerage Scheme	S	2,153,000	Dripsey Water Supply Scheme (incl. Sewerage)	W/S	1,112,000
Leap/ Baltimore Water Supply Scheme	W	6,365,000	Glounthane Sewerage Scheme (G)	S	1,576,000
Schull Water Supply Scheme	W	5,253,000	Innishannon Sewerage Scheme	S	277,000
		<b>61,137,000</b>	Innishannon Wastewater Treatment Plant	S	694,000
<b>Schemes to start 2009</b>			Kerrypike Sewerage Scheme	S	832,000
<b>Cork North</b>			Kerrypike Water Supply Scheme	W	416,000
Banteer/Dromahane Regional Water Supply Scheme	W	1,576,000	Killeagh Wastewater Treatment Plant Extension	S	1,200,000
Conna Regional Water Supply Scheme Extension	W	2,627,000	Killeagh Water Supply Scheme (includes Sewerage)	W/S	485,000
Cork NE Water Supply Scheme	W	4,326,000	Killeens Sewerage Scheme	S	420,000
Cork NW Regional Water Supply Scheme	W	6,046,000	Kinagleary Sewerage Scheme	S	694,000
Millstreet Wastewater Treatment Plant (Upgrade)	S	1,628,000	Midleton Wastewater Treatment Plant Extension	S	4,050,000



# Cork County contd.

## Water Services Investment Programme 2007 - 2009

Serviced Land Initiative contd.	W/S	Est. Cost	Schemes to Advance through Planning cond.	W/S	Est. Cost
<b>Cork South contd.</b>			<b>Cork South</b>		
Mogeely, Castlemartyr & Ladysbridge Water Supply Scheme	W	2,566,000	Carrigtwohill Sewerage Scheme (G)	S	20,000,000
North Cobh Sewerage Scheme (G)	S	3,193,000	Cork Sludge Management (G)	S	14,420,000
Riverstick Water Supply Scheme (incl. Sewerage)	W/S	525,000	Cork Water Supply Scheme (Storage - Mount Emla, Ballincollig & Chetwind) (G)	W	8,500,000
Rochestown Water Supply Scheme	W	2,700,000	Inniscarra Water Treatment Plant (Sludge Treatment)(G)W		5,356,000
Saleen Sewerage Scheme	S	1,051,000	Macroom Sewerage Scheme	S	5,150,000
Youghal Water Supply Scheme	W	2,300,000	Minane Bridge Water Supply Scheme	W	1,421,000
<b>Cork West</b>			<b>Cork West</b>		
Castletownshend Sewerage Scheme	S	1,576,000	Bantry Regional Water Supply Scheme (Distribution)	W	9,455,000
		<b>50,797,000</b>	Cape Clear Water Supply Scheme	W	1,679,000
<b>Rural Towns &amp; Villages Initiative</b>			<b>Rural Towns &amp; Villages Initiative</b>		
<b>Cork North</b>			<b>Cork North</b>		
Buttevant Sewerage Scheme (Collection System)	S	2,446,000	Castletownbere Regional Water Supply Scheme	W	8,405,000
Doneraile Sewerage Scheme (Collection System)	S	1,738,000	Glengarriff Sewerage Scheme	S	2,500,000
			Roscarberry/Owenahincha Sewerage Scheme	S	1,576,000
			Skibbereen Regional Water Supply Scheme Stage 4	W	7,880,000
					<b>95,646,000</b>
<b>Cork South</b>			<b>Water Conservation Allocation</b>		
Innishannon (Ballinadee/ Ballinspittle/ Garrettstown) Water Supply Scheme	W	6,726,000	Asset Management Study		<b>300,000</b>
<b>Cork West</b>			<b>South Western River Basin District (WFD) Project<sup>1</sup></b>		
Ballylicky Sewerage Scheme	S	2,158,000			<b>9,400,000</b>
Baltimore Sewerage Scheme	S	3,162,000			
Castletownbere Sewerage Scheme	S	3,202,000			
Schull Sewerage Scheme	S	3,523,000			
		<b>24,950,000</b>	<b>Programme Total</b>		<b>485,489,000</b>
<b>Schemes to Advance through Planning</b>					
<b>Cork North</b>					
Mitchelstown North Galtees Water Supply Scheme	W	3,152,000			
Mitchelstown Sewerage Scheme	S	3,000,000			
Newmarket Sewerage Scheme	S	3,152,000			

<sup>1</sup> This project is being led by Cork County Council on behalf of other authorities in the River Basin District

(H) Refers to a Hub as designated in the National Spatial Strategy

(G) Refers to a Gateway as designated in the National Spatial Strategy

Mr. Noel O'Keefe,  
Senior Executive Officer,  
Water Services – Capital,  
South Cork Rural,  
Cork County Council,  
County Hall,  
Cork

14<sup>th</sup> September 2006



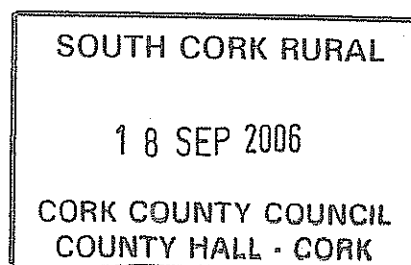
**Re: Dripsey Water and sewerage Serviced Land Initiative**  
**Approval of Preliminary Report for Sewerage element**

A Chara,

I am directed by the Minister for the Environment Heritage and Local Government to convey approval to the Preliminary Report for the sewerage element of the above scheme.

The Preliminary Report is approved subject to the following:

- The level of nitrogen removal recommended in the wastewater treatment plant is not acceptable. The local authority's letter of 28<sup>th</sup> March 2006 amending this issue is noted and accepted.
- The wastewater hydraulic load of 180 l/head/day is to be reviewed.
- Statutory Instrument 419 of 1994, referenced in Section 6.3.5, has been withdrawn and is replaced by SI 254 2001. This withdrawn SI is also referred to in the Dixon Brosnan Report.
- The level of nitrate application allowed under the Nitrate Regulations, SI 788, Good Agricultural Practices for the Protection of Waters, is 170 kg/Ha and not 210 kg/Ha as indicate in the Dixon Brosnan Report



- A Statutory Instrument is now in place dealing with odour and noise arising from wastewater treatment plants, SI 787 of 2005.
- A review of the BOD and SS concentration limits of 20 mg/l and 30 mg/l is to be carried out as the UWWT Regulations allow 25 mg/l and 35 mg/l respectively for these parameters

### **Public Private Partnership Assessment Report**

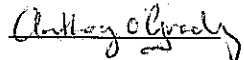
There are a number of anomalies in the Public Private Partnership Assessment Report, which need correction. These are as follows:

- In Section 2.2 the estimate for the Phase 1 wastewater treatment plant upgrading does not agree with the estimate given in the preliminary report.
- In Section 2.3 the Dripsey WWTP is estimated to be 5% of the capacity of the overall Western Bundle. This is correct in terms of O/M. However, in terms of the D/B element, it equates to 18% if the Phase 1 and 2 capacity is taken into account. It is only 10% if the 600 p.e., Phase 1 capacity is taken into account.
- In Section 3.1 incorrect Total Nitrogen final effluent standards are outlined. The local authority wrote to the Department on 28<sup>th</sup> march 2006 and outlined that there was a typographical error in the recommended nitrogen concentration. The Total Nitrogen limit should read 40.6 mg/l.
- In Section 7.1 the estimate for the Phase 1 wastewater treatment plant upgrading does not agree with the estimate given in the preliminary report.
- In Section 7.1 the local authority indicate that a short term operate contract is included in all DB Contracts. However, this should be part of the DB tests on completion that would be required under the MF1 Conditions of Contract.
- In Section 7.2, there is an incorrect reference to Bandon WWTP in the first paragraph. This should be Blarney WWTP.
- In Section 9, there is an incorrect reference to Directive 98/37/EC. This should read 93/37/EEC. In fact this Directive has now been superseded by Directive 2004/18/EC.

Cork County Council, should now proceed with the planning of the scheme, as advised above.

If you have any queries relating to the above, please contact the undersigned at (01) 8882152.

Mise le meas,

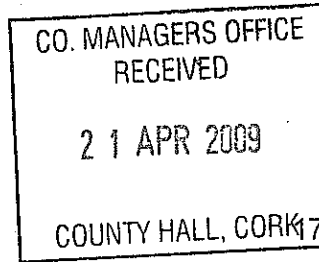
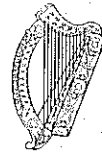
  
Anthony O'Grady,

Water Services Section

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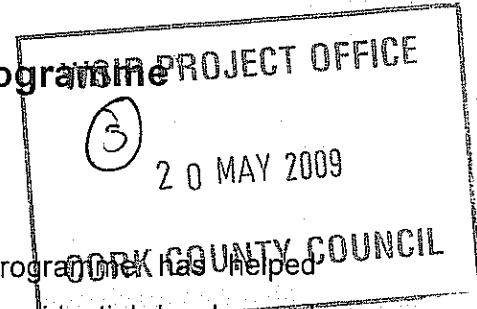
Comhshaol, Oidhreacht agus Rialtas Áitiúil  
Environment, Heritage and Local Government



Circular L3/09

## Water Services Investment Programme

### Serviced Land Initiative



1. Since 1997 the Water Services Investment Programme has helped increase the supply of housing by supporting new residential development through the Serviced Land Initiative (SLI). In light of developments in the economy at large, and in the housing market in particular during 2008, the continued operation of this Initiative has been under review.
2. In some areas of the country there is, at present, an oversupply of housing, with many recently completed dwellings lying unsold. In this context the SLI is of questionable continuing benefit to the housing market at this stage and is being withdrawn.
3. With immediate effect all existing approvals, for which contracts have not been signed or letters of intent have issued, are being withdrawn. Schemes already commenced may continue to completion in line with procedures outlined in Circular L1/07 provided all work is scheduled for substantial completion by end 2010. No payments will be made beyond 31 December 2011.
4. Where multi-phase projects (generally costing more than €5m) are partially completed, water services authorities should write to the Department (by Friday, 29 May 2009 at the latest) outlining the progress made to date, the scale of works to be completed, the expected timeframe to completion and the case, if any, for allowing the remainder of the scheme to proceed. In

Department of Environment, Heritage and Local Government  
Block 1, Floor 2, Irish Life Buildings, Lower Abbey Street, Dublin 1  
Tel: 353 1 888 2000 LoCall: 1890 20 20 21 Fax: 353 1 888 2687 Web: www.environ.ie



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this context the authority should address the criteria set out in paragraph 5 immediately below.

5. Where a water services authority is of the opinion that the continuation of an approved scheme for which contracts have not been signed is necessary for the proper development of the area, it is open to that authority to make a case for the scheme. Any case being put to the Department should address, but not be limited to, the following:
- the volume of unsold new housing in the area to be served by the proposed scheme;
  - the basis on which the water services authority believes that there is a continuing requirement for further housing to be built;
  - whether specific developers/contractors have entered formal agreements with the water services authority to meet the 60% local share of the cost of the proposal.

Any such case received by the Department by Friday, 29 May 2009 will be considered on its merits.

6. Water services authorities are required to complete the **Appendix** to this circular in respect of all approved SLI schemes for which they are responsible, irrespective of the scheme status (except schemes where final accounts have been approved by the Department). This Appendix should be returned to the Department by Friday, 29 May 2009. Where a water services authority does not submit the necessary return by the due date the Department will not, under any circumstances, accept liability for any costs incurred on schemes commenced by that authority.
7. The Department will not accept any new applications for SLI schemes but those applications presently under examination in the Department will be finalised based on the criteria set out in paragraph 5 above. Details of those schemes should be included in the **Appendix** to this circular.

8. This Circular should be brought to the attention of all administrative and engineering personnel involved in water services projects. Enquiries may be addressed to Mr. Tom Walsh, Tel: 01-8882168, e-mail: [tom\\_walsh@environ.ie](mailto:tom_walsh@environ.ie).

*Maria Graham*

---

Maria Graham  
Principal Officer  
Water Services Section

To: County and City Managers  
Directors of Services (Water Services Infrastructure)  
Directors of Services (Finance)

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Appendix

Scheme Name	Approved Cost €	Current Estimated Cost €	Start Date or Expected Start Date	Completion Date or Expected Completion Date	Departmental Funding Drawn to Date €	Balance for Drawdown €

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# Cork County

## Water Services Investment Programme 2007 - 2009

Schemes at Construction	W/S	Est. Cost	Schemes to start 2009 contd.	W/S	Est. Cost
<b>Cork North</b>			<b>Cork South</b>		
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Ballyvourney/ Ballymakeery Sewerage Scheme	S	3,049,000	Shannagarry/ Garryvoe/ Ballycotton Sewerage Scheme	S	3,780,000
Cobh/ Midleton/ Carrigtwohill Water Supply Scheme	W	10,135,000	Youghal Sewerage Scheme	S	14,420,000
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<b>Schemes to start 2007</b>			Dunmanway Regional Water Supply Scheme Stage 1	W	12,669,000
					<b>164,629,000</b>
<b>Cork North</b>			<b>Serviced Land Initiative</b>		
North Cork Grouped DBO Wastewater Treatment Plant (Buttevant, Doneraile & Kilbrin)	S	5,150,000	<b>Cork North</b>		
<b>Cork West</b>			Ballyclough Water Supply Scheme	W	139,000
Skibbereen Sewerage Scheme	S	20,000,000	Ballyhooley Improvement Scheme	W/S	139,000
		<b>25,150,000</b>	Broghill-Rathgoggin Sewerage Scheme	S	406,000
<b>Schemes to start 2008</b>			Bweeng Water Supply Scheme	W	115,000
<b>Cork North</b>			Churchtown Sewerage Scheme (incl. Water)	W/S	543,000
Mallow/ Ballyvinter Regional Water Supply Scheme (H) W		8,662,000	Clondulane Sewage Treatment Plant	S	417,000
Mallow Sewerage Scheme (H)	S	3,408,000	Freemount Sewerage Scheme	S	150,000
<b>Cork South</b>			Pike Road Sewerage Scheme (incl. Water)	W/S	2,080,000
Ballincollig Sewerage Scheme (Nutrient Removal) (G)	S	948,000	Rathcormac Sewerage Scheme (incl. Water)	W/S	555,000
Ballingeary Sewerage Scheme	S	1,296,000	Spa Glen Sewerage Scheme	S	736,000
Bandon Sewerage Scheme Stage 2	S	14,729,000	Uplands Fermoy Sewerage Scheme (incl. Water)	W/S	1,174,000
City Environs (CASP) Strategic Study (G)	S	153,000	Watergrasshill Water Supply Scheme (incl. Sewerage) (G)	W/S	4,151,000
Cloghroe Sewerage Scheme (Upgrade)	S	683,000	<b>Cork South</b>		
Coachford Water Supply Scheme	W	1,318,000	Ballincollig Sewerage Scheme (Barry's Rd Foul and Storm Drainage) (G)	S	1,164,000
Garretstown Sewerage Scheme	S	2,153,000	Belgooley, Water Supply Scheme (incl. Sewerage)	W/S	2,913,000
Inniscarra Water Treatment Plant Extension Phase 1	W	2,678,000	Blarney Water Supply Scheme (Ext. to Station Rd) (G)	W	416,000
Little Island Sewerage Scheme (G)	S	2,200,000	Carrigtwohill Sewerage Scheme (Treatment and Storm Drain) (G)	S	7,632,000
<b>Cork West</b>			Castlematyr Wastewater Treatment Plant Extension	S	1,200,000
Bantry Sewerage Scheme	S	7,148,000	Crookstown Sewerage Scheme (incl. Water)	W/S	1,200,000
Dunmanway Sewerage Scheme	S	2,153,000	Dripsey Water Supply Scheme (incl. Sewerage)	W/S	1,112,000
Leap/ Baltimore Water Supply Scheme	W	6,365,000	Glounthane Sewerage Scheme (G)	S	1,576,000
Schull Water Supply Scheme	W	5,253,000	Innishannon Sewerage Scheme	S	277,000
		<b>61,137,000</b>	Innishannon Wastewater Treatment Plant	S	694,000
<b>Schemes to start 2009</b>			Kerrypike Sewerage Scheme	S	832,000
<b>Cork North</b>			Kerrypike Water Supply Scheme	W	416,000
Banteer/Dromahane Regional Water Supply Scheme	W	1,576,000	Killeagh Wastewater Treatment Plant Extension	S	1,200,000
Conna Regional Water Supply Scheme Extension	W	2,627,000	Killeagh Water Supply Scheme (includes Sewerage)	W/S	485,000
Cork NE Water Supply Scheme	W	4,326,000	Killeens Sewerage Scheme	S	420,000
Cork NW Regional Water Supply Scheme	W	6,046,000	Kinagleary Sewerage Scheme	S	694,000
Millstreet Wastewater Treatment Plant (Upgrade)	S	1,628,000	Midleton Wastewater Treatment Plant Extension	S	4,050,000

# Cork County contd.

## Water Services Investment Programme 2007 - 2009

Serviced Land Initiative contd.	W/S	Est. Cost	Schemes to Advance through Planning cond.	W/S	Est. Cost
<b>Cork South contd.</b>			<b>Cork South</b>		
Mogeely, Castlemartyr & Ladysbridge Water Supply Scheme	W	2,566,000	Carrigtwohill Sewerage Scheme (G)	S	20,000,000
North Cobh Sewerage Scheme (G)	S	3,193,000	Cork Sludge Management (G)	S	14,420,000
Riverstick Water Supply Scheme (incl. Sewerage)	W/S	525,000	Cork Water Supply Scheme (Storage - Mount Emla, Ballincollig & Chetwind) (G)	W	8,500,000
Rochestown Water Supply Scheme	W	2,700,000	Inniscarra Water Treatment Plant (Sludge Treatment)(G)W		5,356,000
Saleen Sewerage Scheme	S	1,051,000	Macroom Sewerage Scheme	S	5,150,000
Youghal Water Supply Scheme	W	2,300,000	Minane Bridge Water Supply Scheme	W	1,421,000
<b>Cork West</b>			<b>Cork West</b>		
Castletownshend Sewerage Scheme	S	1,576,000	Bantry Regional Water Supply Scheme (Distribution)	W	9,455,000
		<b>50,797,000</b>	Cape Clear Water Supply Scheme	W	1,679,000
<b>Rural Towns &amp; Villages Initiative</b>			<b>Rural Towns &amp; Villages Initiative</b>		
<b>Cork North</b>			<b>Cork North</b>		
Buttevant Sewerage Scheme (Collection System)	S	2,446,000	Castletownbere Regional Water Supply Scheme	W	8,405,000
Doneraile Sewerage Scheme (Collection System)	S	1,738,000	Glengarriff Sewerage Scheme	S	2,500,000
			Roscarberry/Owenahincha Sewerage Scheme	S	1,576,000
			Skibbereen Regional Water Supply Scheme Stage 4	W	7,880,000
					<b>95,646,000</b>
<b>Cork South</b>			<b>Water Conservation Allocation</b>		
Innishannon (Ballinadee/ Ballinspittle/ Garrettstown) Water Supply Scheme	W	6,726,000	Asset Management Study		<b>300,000</b>
<b>Cork West</b>			<b>South Western River Basin District (WFD) Project<sup>1</sup></b>		
Ballylicky Sewerage Scheme	S	2,158,000			<b>9,400,000</b>
Baltimore Sewerage Scheme	S	3,162,000			
Castletownbere Sewerage Scheme	S	3,202,000			
Schull Sewerage Scheme	S	3,523,000			
		<b>24,950,000</b>	<b>Programme Total</b>		<b>485,489,000</b>
<b>Schemes to Advance through Planning</b>					
<b>Cork North</b>					
Mitchelstown North Galtees Water Supply Scheme	W	3,152,000			
Mitchelstown Sewerage Scheme	S	3,000,000			
Newmarket Sewerage Scheme	S	3,152,000			

<sup>1</sup> This project is being led by Cork County Council on behalf of other authorities in the River Basin District

(H) Refers to a Hub as designated in the National Spatial Strategy

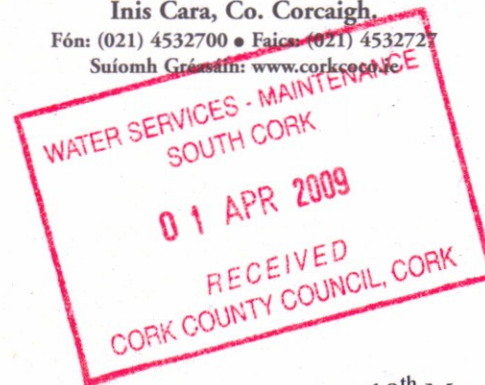
(G) Refers to a Gateway as designated in the National Spatial Strategy

# Comhairle Contae Chorcaí Cork County Council

Environmental Directorate,  
Inniscarra, Co. Cork.  
Tel. No. (021) 4532700 • Fax No. (021) 4532727  
Web: www.corkcoco.ie  
An Stiúrthóireacht Comhshaoil,  
Inis Cara, Co. Corcaigh  
Fón: (021) 4532700 • Faisc: (021) 4532727  
Suíomh Gréasáin: www.corkcoco.ie



N. O' Mahony  
Cork Co. Council  
Bairdcasting  
Co Cork



18<sup>th</sup> March 2009

## Re: Monitoring Results for 2008

Dear Sir/Madam,

Enclosed are the licensed discharge wastewater monitoring results for your facility for 2008. Please note that Total Nitrogen and Total Phosphorus tests were subcontracted to an outside laboratory since early October 2008.

Measurements of uncertainty values for the test are as follows:

Test	Range mg/l	Estimated Uncertainty
TN	100	+ 3.8 mg/l
TP	0.5	+ 0.04 mg/l
TP	5 mg/l	+ 0.44 mg/l
TP	10 mg/l	+ 0.87 mg/l

Please accept my apologies for the late arrival of results but due to circumstances outside my control. I was unable to issue results in February.

If you have any queries in relation to the results, please do not hesitate to contact me.

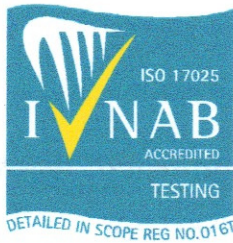
Yours sincerely,



Valerie Hannon,  
A/Senior Executive Scientist,  
Wastewater Laboratory.

Direct Dial: 021 – 4532707  
Fax: 021 – 4532777  
Email: [valerie.hannon@corkcoco.ie](mailto:valerie.hannon@corkcoco.ie)





Laboratory Test Report  
Cork County Council  
Waste Water Laboratory  
Inniscarra, Co. Cork

March 19, 2009

Industry Name Dripsey Sewage Treatment Plant  
Address Dripsey,  
Co. Cork

Industry Code No. 335  
Report Ref No. 119-03-09-123  
Issued to No. Mahony  
STP

Licence No. Type S

Licence Limit	Volume m3	pH	B.O.D. mg/l	C.O.D. mg/l	S.Solids mg/l	TP-P mg/l	Code	Comments
999999		12.99 3.99	25	125	35	99.9		
Date								
06/05/08		7.1	7.5	29	15	1.47	GS384	G OPO4-P=1.33mg/l
10/07/08			22	69	26	2.15	GS632	G TN-N=21.8mg/L
09/10/08			5.1	26	7		GS1036	G
16/10/08		7.1	5.0	32	17		GS1089	G NH3-N= 2.8mg/l, OPO4-P= 1
% Compl. Average	*** ******	100 7.10	100 9.90	100 39.00	100 16.25	100 1.81	*** *****	*** *****

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The samples are received at the Laboratory on the day of sampling. The above test methods are based on Standard Methods for the examination of Water and Waste Water, 21st Edition 2005, APHA, AWWA, WEF.

C = Composite Sample, G = Grab Sample.

The compliance value may be varied on items marked with an \* by the application of uncertainty of measurement values on reverse Page Chemical Procedure Numbers(CP No.) for INAB accredited tests are as follows:

- CP NO. 1 = B.O.D.
- CP NO. 3 = S.S.
- CP NO. 20 = TP-P
- CP NO. 5 = pH
- CP NO. 6 = C.O.D.
- ~~CP NO. 7 = Cl~~
- CP NO. 22 = Ammonia(KONELAB)
- CP NO. 23 = OPO4-P(KONELAB)
- CP NO. 24 = Chloride (KONELAB)
- CP NO. 25 = Sulphate(KONELAB)

This report relates only to the samples listed above. This report shall not be reproduced except in full and only with the approval of the testing laboratory. Cork County Council is not accredited by INAB for tests marked with \$. Kg loadings based on flows as supplied by the company. ~ indicates results that have been edited.

Reported by: V. Hannon Date: 19/03/09

Ms. V. Hannon Technical Manager   
Deputy Technical Manager

CTR 001

Issue No 36

VH  
~~November 2007~~ October 2008

## Wastewater Laboratory Cork County Council- Test Report Addendum

- a. Sample date reported in column 1 on this report is the date of collection of the sample from the industry name and address as outlined at the top of the report.
- b. Cork County Council wastewater laboratory are not accredited for sample collection.
- c. Data reported in (d) below is defined in section 5.10.3 (c) in wastewater laboratory quality manual.
- d. Table of Uncertainty Of Measurement – Estimate Of Values For Accredited Tests

Chemical Procedure No.	range	Test Name	Estimated Uncertainty	Units
CP No. 1	1 - 8 mg/l	Biochemical Oxygen Demand (BOD)	± 0.30	mg/l
CP No. 1	9 - 70 mg/l	Biochemical Oxygen Demand (BOD)	± 3.2	mg/l
CP No. 1	71 - 700 mg/l	Biochemical Oxygen Demand (BOD)	± 40	mg/l
CP No. 3	35 mg/l	Suspended Solids (SS)	± 6.4	mg/l
CP No. 3	200 - 400mg/l	Suspended Solids (SS)	± 41.6	mg/l
CP No. 3	700 - 1000mg/l	Suspended Solids (SS)	± 80.0	mg/l
CP No. 5	2 - 12	pH	± 0.12	pH Units
CP No. 6	< 6 mg/l	Chemical Oxygen Demand (COD LR)	± 5.6	mg/l
CP No. 6	15 - 75 mg/l	Chemical Oxygen Demand (COD LR)	± 10.6	mg/l
CP No. 6	100 - 135 mg/l	Chemical Oxygen Demand (COD LR)	± 17.4	mg/l
CP No. 6	120 - 1500mg/l	Chemical Oxygen Demand (COD LR) High Range	± 26.8	mg/l
CP No. 20	0.2 - 2.5 mg/l	Total Phosphorus (TP,P)	± 0.22	mg/l
CP No. 22	0.1 - 0.9 mg/l	Ammonia (Konelab)	± 0.04	mg/l
CP No. 22	1.0 - 2.0 mg/l	Ammonia (Konelab)	± 0.10	mg/l
CP No. 22	2 - 10 mg/l	Ammonia (Konelab)	± 0.32	mg/l
CP No. 22	11 - 19 mg/l	Ammonia (Konelab)	± 0.72	mg/l
CP No. 22	20 - 25 mg/l	Ammonia (Konelab)	± 1.56	mg/l
CP No. 23	0.05 - 1.00 mg/l	Orthophosphate as P (Konelab)	± 0.04	mg/l
CP No. 24	25.00 - 99.00 mg/l	Chloride (Konelab)	± 3.04	mg/l
CP No. 24	100.00 - 200.00 mg/l	Chloride (Konelab)	± 11.16	mg/l
CP No. 25	30.00 - 199.00 mg/l	Sulphate (Konelab)	± 3.42	mg/l
CP No. 25	200.00 - 250.00 mg/l	Sulphate (Konelab)	± 8.70	mg/l

**January 2009**

The raw data used to evaluate the above estimations is stored in the Wastewater Laboratory, Cork County Council.

The method followed is located in the Uncertainty of Measurement file and in the Eurachem Guidelines for Quantifying Uncertainty in Analytical Measurement.

# Cork County

## Water Services Investment Programme 2007 - 2009

Schemes at Construction	W/S	Est. Cost	Schemes to start 2009 contd.	W/S	Est. Cost
<b>Cork North</b>			<b>Cork South</b>		
Mitchelstown Sewerage Scheme (Nutrient Removal)	S	221,000	Ballincollig Sewerage Scheme (Upgrade) (G)	S	22,248,000
<b>Cork South</b>			Cork Lower Harbour Sewerage Scheme (excl. Crosshaven SS)	S	73,542,000
Ballyvourney/ Ballymakeery Sewerage Scheme	S	3,049,000	Shannagarry/ Garryvoe/ Ballycotton Sewerage Scheme	S	3,780,000
Cobh/ Midleton/ Carrigtwohill Water Supply Scheme	W	10,135,000	Youghal Sewerage Scheme	S	14,420,000
Cork Lower Harbour Sewerage Scheme (Crosshaven SS) (G)	S	4,850,000	<b>Cork West</b>		
Cork Water Strategy Study (G)	W	941,000	Ballydehob Sewerage Scheme	S	683,000
Kinsale Sewerage Scheme	S	20,000,000	Bantry Water Supply Scheme	W	14,935,000
Midleton Sewerage Scheme (Infiltration Reduction) (G)	S	2,078,000	Clonakilty Sewerage Scheme (Plant Capacity Increase)	S	3,677,000
		<b>41,274,000</b>	Courtmacsherry/ Timoleague Sewerage Scheme	S	2,472,000
<b>Schemes to start 2007</b>			Dunmanway Regional Water Supply Scheme Stage 1	W	12,669,000
					<b>164,629,000</b>
<b>Cork North</b>			<b>Serviced Land Initiative</b>		
North Cork Grouped DBO Wastewater Treatment Plant (Buttevant, Doneraile & Kilbrin)	S	5,150,000	<b>Cork North</b>		
<b>Cork West</b>			Ballycough Water Supply Scheme	W	139,000
Skibbereen Sewerage Scheme	S	20,000,000	Ballyhooley Improvement Scheme	W/S	139,000
		<b>25,150,000</b>	Broghill-Rathgoggin Sewerage Scheme	S	406,000
<b>Schemes to start 2008</b>			Bweeng Water Supply Scheme	W	115,000
<b>Cork North</b>			Churchtown Sewerage Scheme (incl. Water)	W/S	543,000
Mallow/ Ballyvinter Regional Water Supply Scheme (H) W		8,662,000	Clondulane Sewage Treatment Plant	S	417,000
Mallow Sewerage Scheme (H)	S	3,408,000	Freemount Sewerage Scheme	S	150,000
<b>Cork South</b>			Pike Road Sewerage Scheme (incl. Water)	W/S	2,080,000
Ballincollig Sewerage Scheme (Nutrient Removal) (G)	S	948,000	Rathcormac Sewerage Scheme (incl. Water)	W/S	555,000
Ballingeary Sewerage Scheme	S	1,296,000	Spa Glen Sewerage Scheme	S	736,000
Bandon Sewerage Scheme Stage 2	S	14,729,000	Uplands Fermoy Sewerage Scheme (incl. Water)	W/S	1,174,000
City Environs (CASP) Strategic Study (G)	S	153,000	Watergrasshill Water Supply Scheme (incl. Sewerage) (G)	W/S	4,151,000
Cloghroe Sewerage Scheme (Upgrade)	S	683,000	<b>Cork South</b>		
Coachford Water Supply Scheme	W	1,318,000	Ballincollig Sewerage Scheme (Barry's Rd Foul and Storm Drainage) (G)	S	1,164,000
Garretstown Sewerage Scheme	S	2,153,000	Belgooley, Water Supply Scheme (incl. Sewerage)	W/S	2,913,000
Inniscarra Water Treatment Plant Extension Phase 1	W	2,678,000	Blarney Water Supply Scheme (Ext. to Station Rd) (G)	W	416,000
Little Island Sewerage Scheme (G)	S	2,200,000	Carrigtwohill Sewerage Scheme (Treatment and Storm Drain) (G)	S	7,632,000
<b>Cork West</b>			Castlematyr Wastewater Treatment Plant Extension	S	1,200,000
Bantry Sewerage Scheme	S	7,148,000	Crookstown Sewerage Scheme (incl. Water)	W/S	1,200,000
Dunmanway Sewerage Scheme	S	2,153,000	Dripsey Water Supply Scheme (incl. Sewerage)	W/S	1,112,000
Leap/ Baltimore Water Supply Scheme	W	6,365,000	Glounthane Sewerage Scheme (G)	S	1,576,000
Schull Water Supply Scheme	W	5,253,000	Innishannon Sewerage Scheme	S	277,000
		<b>61,137,000</b>	Innishannon Wastewater Treatment Plant	S	694,000
<b>Schemes to start 2009</b>			Kerrypike Sewerage Scheme	S	832,000
<b>Cork North</b>			Kerrypike Water Supply Scheme	W	416,000
Banteer/Dromahane Regional Water Supply Scheme	W	1,576,000	Killeagh Wastewater Treatment Plant Extension	S	1,200,000
Conna Regional Water Supply Scheme Extension	W	2,627,000	Killeagh Water Supply Scheme (includes Sewerage)	W/S	485,000
Cork NE Water Supply Scheme	W	4,326,000	Killeens Sewerage Scheme	S	420,000
Cork NW Regional Water Supply Scheme	W	6,046,000	Kinagleary Sewerage Scheme	S	694,000
Millstreet Wastewater Treatment Plant (Upgrade)	S	1,628,000	Midleton Wastewater Treatment Plant Extension	S	4,050,000

Agglomeration details

Leading Local Authority	Cork County Council
Co-Applicants	
Agglomeration	Dripsey
Population Equivalent	600
Level of Treatment	Secondary
Treatment plant address	Agharinagh, Dripsey.
Grid Ref (12 digits, 6E, 6N)	148619 / 074844
EPA Reference No:	

Contact details

Contact Name:	Patricia Power
Contact Address:	Area Operations South, Cork County Council, County Hall, Carrigrohane Road, Cork.
Contact Number:	021 4285 285
Contact Fax:	021 4276 327
Contact Email:	patricia.power@corkcoco.ie

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Table D.1(i)(a): EMISSIONS TO SURFACE/GROUND WATERS (Primary Discharge Point)

Discharge Point Code: SW-1

Local Authority Ref No:	SW01 - Dripsey	
Source of Emission:	Treated Effluent	
Location:	Agharinagh	
Grid Ref (12 digits, 6E, 6N)	148607 / 074817	
Name of Receiving waters:	Dripsey River	
Water Body:	River Water Body	
River Basin District	South Western RBD	
Designation of Receiving Waters:	Good	
Flow Rate in Receiving Waters:	0	m <sup>3</sup> .sec <sup>-1</sup> Dry Weather Flow
	0.24	m <sup>3</sup> .sec <sup>-1</sup> 95% Weather Flow
Additional Comments (e.g. commentary on zero flow or other information deemed of value)	The 95%ile flow is taken from available South Western River Basin District data there are no figures available for DWF	

Emission Details:

(i) Volume emitted			
Normal/day	135 m <sup>3</sup>	Maximum/day	810 m <sup>3</sup>
Maximum rate/hour	33.75 m <sup>3</sup>	Period of emission (avg)	60 min/hr 24 hr/day 365 day/yr
Dry Weather Flow	0.00156 m <sup>3</sup> /sec		

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Table D.1(i)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of The Emission (Primary Discharge Point)

Discharge Point Code: SW-1

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
pH	pH	Grab	= 9	
Temperature	°C	Grab	= 25	
Electrical Conductivity (@ 25°C)	µS/cm	Grab	= 1000	
Suspended Solids	mg/l	Grab	= 50	6.75
Ammonia (as N)	mg/l	Grab	= 0	0
Biochemical Oxygen Demand	mg/l	Grab	= 50	6.75
Chemical Oxygen Demand	mg/l	Grab	= 200	27
Total Nitrogen (as N)	mg/l	Grab	= 50	6.75
Nitrite (as N)	mg/l	Grab	= 0	0
Nitrate (as N)	mg/l	Grab	= 0	0
Total Phosphorous (as P)	mg/l	Grab	= 8	1.08
OrthoPhosphate (as P)	mg/l	Grab	= 6	0.81
Sulphate (SO <sub>4</sub> )	mg/l	Grab	= 0	0
Phenols (Sum)	µg/l	Grab	= 0	0

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper  
 For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

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Table D.1(i)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of The Emission (Primary Discharge Point)

Discharge Point Code: SW-1

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
Atrazine	µg/l	Grab	= 0	0
Dichloromethane	µg/l	Grab	= 0	0
Simazine	µg/l	Grab	= 0	0
Toluene	µg/l	Grab	= 0	0
Tributyltin	µg/l	Grab	= 0	0
Xylenes	µg/l	Grab	= 0	0
Arsenic	µg/l	Grab	= 0	0
Chromium	µg/l	Grab	= 0	0
Copper	µg/l	Grab	= 0	0
Cyanide	µg/l	Grab	= 0	0
Flouride	µg/l	Grab	= 0	0
Lead	µg/l	Grab	= 0	0
Nickel	µg/l	Grab	= 0	0
Zinc	µg/l	Grab	= 0	0
Boron	µg/l	Grab	= 0	0
Cadmium	µg/l	Grab	= 0	0
Mercury	µg/l	Grab	= 0	0
Selenium	µg/l	Grab	= 0	0
Barium	µg/l	Grab	= 0	0

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper

For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

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TABLE E.1(i): WASTE WATER FREQUENCY AND QUANTITY OF DISCHARGE – Primary and Secondary Discharge Points

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m <sup>3</sup> /annum)
SW-1	365	49275

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TABLE E.1(ii): WASTE WATER FREQUENCY AND QUANTITY OF DISCHARGE – Storm Water Overflows

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m <sup>3</sup> /annum)	Complies with Definition of Storm Water Overflow
---	-------------------------------------	--	--

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TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1d
Grid Ref (12 digits, 6E, 6N)	148773 / 073895

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	16/10/08	01/01/09	02/04/09	07/05/09			
pH				= 7.7	Grab	2	Electrochemical
Temperature		= 0			Grab	0.5	Electrochemical
Electrical Conductivity (@ 25°C)				= 163	Grab	0.5	Electrochemical
Suspended Solids				< 2.5	Grab	0.5	Gravimetric
Ammonia (as N)				< 0.1	Grab	0.02	Colorimetric
Biochemical Oxygen Demand				= 2	Grab	0.06	Electrochemical
Chemical Oxygen Demand				< 21	Grab	8	Digestion & Colorimetric
Dissolved Oxygen		= 0			Grab	0	ISE
Hardness (as CaCO <sub>3</sub> )		= 0			Grab	0	Titrimetric
Total Nitrogen (as N)				= 4.18	Grab	0.5	Digestion & Colorimetric
Nitrite (as N)				< 0.1	Grab	0.013	Colorimetric
Nitrate (as N)				= 1.33	Grab	0.04	Colorimetric
Total Phosphorous (as P)				< 0.05	Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)	< 0.05		0.05	< 0.05	Grab	0.02	Colorimetric
Sulphate (SO <sub>4</sub> )				< 30	Grab	30	Turbidimetric
Phenols (Sum)				< 0.1	Grab	0.1	GC-MS2

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper

For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Additional Comments:	01/01/09 and 0 used as default settings where results are not available
----------------------	---

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1d
Grid Ref (12 digits, 6E, 6N)	148773 / 073895

Parameter	Results (µg/l)			Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	02/04/09	07/05/09			
Atrazine			< 0.01	Grab	0.96	HPLC
Dichloromethane			< 1	Grab	1	GC-MS1
Simazine			< 0.01	Grab	0.01	HPLC
Toluene			< 0.28	Grab	0.02	GC-MS1
Tributyltin	= 0			Grab	0.02	GC-MS1
Xylenes			< 1	Grab	1	GC-MS1
Arsenic			< 0.96	Grab	0.96	ICP-MS
Chromium		< 20	< 20	Grab	20	ICP-OES
Copper		< 20	< 20	Grab	20	ICP-OES
Cyanide			< 5	Grab	5	Colorimetric
Flouride			< 100	Grab	100	ISE
Lead		< 20	< 20	Grab	20	ICP-OES
Nickel		< 20	< 20	Grab	20	ICP-OES
Zinc		< 20	< 20	Grab	20	ICP-OES
Boron		< 20	< 20	Grab	20	ICP-OES
Cadmium		< 20	< 20	Grab	20	ICP-OES
Mercury			< 0.2	Grab	0.2	ICP-MS
Selenium			= 7.7	Grab	0.74	ICP-MS
Barium		= 69		Grab	20	ICP-OES

Additional Comments:	TBT value is 0.02ug/l as Sn TBT testing not required
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TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1u
Grid Ref (12 digits, 6E, 6N)	147700 / 075502

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	16/10/08	01/01/09	02/04/09	07/05/09			
pH				= 7.6	Grab	2	Electrochemical
Temperature		= 0			Grab	0.5	Electrochemical
Electrical Conductivity (@ 25°C)				= 156	Grab	0.5	Electrochemical
Suspended Solids				< 2.5	Grab	0.5	Gravimetric
Ammonia (as N)				< 0.1	Grab	0.02	Colorimetric
Biochemical Oxygen Demand				= 2	Grab	0.06	Electrochemical
Chemical Oxygen Demand				< 21	Grab	8	Digestion & Colorimetric
Dissolved Oxygen		= 0			Grab	0	ISE
Hardness (as CaCO <sub>3</sub> )		= 0			Grab	0	Titimetric
Total Nitrogen (as N)				= 3.79	Grab	0.5	Digestion & Colorimetric
Nitrite (as N)				< 0.1	Grab	0.013	Colorimetric
Nitrate (as N)				= 1.15	Grab	0.04	Colorimetric
Total Phosphorous (as P)				< 0.05	Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)	< 0.05		0.05	< 0.05	Grab	0.02	Colorimetric
Sulphate (SO <sub>4</sub> )				< 30	Grab	30	Turbidimetric
Phenols (Sum)				< 0.1	Grab	0.1	GC-MS2

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper

For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Additional Comments:	01/01/09 and 0 used as default settings where results are not available
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TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1u
Grid Ref (12 digits, 6E, 6N)	147700 / 075502

Parameter	Results (µg/l)			Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	02/04/09	07/05/09			
Atrazine			< 0.01	Grab	0.96	HPLC
Dichloromethane			< 1	Grab	1	GC-MS1
Simazine			< 0.01	Grab	0.01	HPLC
Toluene			< 0.28	Grab	0.02	GC-MS1
Tributyltin	= 0			Grab	0.02	GC-MS1
Xylenes			< 1	Grab	1	GC-MS1
Arsenic			< 0.96	Grab	0.96	ICP-MS
Chromium		< 20	< 20	Grab	20	ICP-OES
Copper		< 20	< 20	Grab	20	ICP-OES
Cyanide			< 5	Grab	5	Colorimetric
Flouride			< 100	Grab	100	ISE
Lead		< 20	< 20	Grab	20	ICP-OES
Nickel		< 20	< 20	Grab	20	ICP-OES
Zinc		< 20	< 20	Grab	20	ICP-OES
Boron		< 20	< 20	Grab	20	ICP-OES
Cadmium		< 20	< 20	Grab	20	ICP-OES
Mercury			< 0.2	Grab	0.2	ICP-MS
Selenium			= 7.4	Grab	0.74	ICP-MS
Barium		= 72.7	= 29.76	Grab	20	ICP-OES

Additional Comments:	TBT value is 0.02ug/l as Sn TBT testing not required
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**Annex 2: Check List For Regulation 16 Compliance**

Regulation 16 of the waste water discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007) sets out the information which must, in all cases, accompany a discharge licence application. In order to ensure that the application fully complies with the legal requirements of regulation 16 of the 2007 Regulations, all applicants should complete the following.

In each case, refer to the attachment number(s), of your application which contains(s) the information requested in the appropriate sub-article.

<b>Regulation 16(1)</b> <b>In the case of an application for a waste water discharge licence, the application shall -</b>		<b>Attachment Number</b>	<b>Checked by Applicant</b>
(a)	give the name, address, telefax number (if any) and telephone number of the applicant (and, if different, of the operator of any treatment plant concerned) and the address to which correspondence relating to the application should be sent and, if the operator is a body corporate, the address of its registered office or principal office,	B1	Yes
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,	B7	Yes
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the waste water treatment plant and/or the waste water discharge point or points to which the application relates,	B2	Yes
(d)	state the population equivalent of the agglomeration to which the application relates,	B9	Yes
(e)	specify the content and extent of the waste water discharge, the level of treatment provided, if any, and the flow and type of discharge,	C, D	Yes
(f)	give details of the receiving water body, including its protected area status, if any, and details of any sensitive areas or protected areas or both in the vicinity of the discharge point or points likely to be affected by the discharge concerned, and for discharges to ground provide details of groundwater protection schemes in place for the receiving water body and all associated hydrogeological and geological assessments related to the receiving water environment in the vicinity of the discharge.	D2, F	Yes
(g)	identify monitoring and sampling points and indicate proposed arrangements for the monitoring of discharges and, if Regulation 17 does not apply, provide details of the likely environmental consequences of any such discharges,	E3	Yes
(h)	in the case of an existing waste water treatment plant, specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application,	E4	Yes
(i)	describe the existing or proposed measures, including emergency procedures, to prevent unintended waste water discharges and to minimise the impact on the environment of any such discharges,	G	Yes
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,	F2	Yes
(k)	give details, and an assessment of the effects, of any existing or proposed emissions on the environment, including any environmental medium other than those into which the emissions are, or are to be made, and of proposed measures to prevent or eliminate or, where that is not practicable, to limit any pollution caused in such discharges,	F1	Yes
(l)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,	G	Yes
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.	G3	Yes
(n)	Any other information as may be stipulated by the Agency.		No
<b>Regulation 16(3)</b> <b>Without prejudice to Regulation 16 (1) and (2), an application for a licence shall be accompanied by -</b>		<b>Attachment Number</b>	<b>Checked by Applicant</b>
(a)	a copy of the notice of intention to make an application given pursuant to Regulation 9,	B8	Yes
(b)	where appropriate, a copy of the notice given to a relevant water services authority under Regulation 13,	Not Applicable	Yes
(c)	Such other particulars, drawings, maps, reports and supporting documentation as are necessary to identify and describe, as appropriate -		No
(c) (i)	the point or points, including storm water overflows, from which a discharge or discharges take place or are to take place, and	B3	Yes
(c) (ii)	the point or points at which monitoring and sampling are undertaken or are to be undertaken,	E3	Yes
(d)	such fee as is appropriate having regard to the provisions of Regulations 38 and 39.	B9(iii)	Yes

Regulation 16(4) An original application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under Regulation 16(3) in hardcopy or in an electronic or other format as specified by the Agency.		Attachment Number	Checked by Applicant
1	An Original Application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under regulation 16(3) in hardcopy or in electronic or other format as specified by the agency.		Yes
Regulation 16(5) For the purpose of paragraph (4), all or part of the 2 copies of the said application and associated documents and particulars may, with the agreement of the Agency, be submitted in an electronic or other format specified by the Agency.		Attachment Number	Checked by Applicant
1	Signed original.		Yes
2	2 hardcopies of application provided or 2 CD versions of application (PDF files) provided.		Yes
3	1 CD of geo-referenced digital files provided.		Yes
Regulation 17 Where a treatment plant associated with the relevant waste water works is or has been subject to the European Communities (Environmental Impact Assessment) Regulations 1989 to 2001, in addition to compliance with the requirements of Regulation 16, an application in respect of the relevant discharge shall be accompanied by a copy of an environmental impact statement and approval in accordance with the Act of 2000 in respect of the said development and may be submitted in an electronic or other format specified by the Agency		Attachment Number	Checked by Applicant
1	EIA provided if applicable	Not Applicable	Yes
2	2 hardcopies of EIS provided if applicable.	Not Applicable	Yes
3	2 CD versions of EIS, as PDF files, provided.	Not Applicable	Yes
Regulation 24 In the case of an application for a waste water discharge certificate of authorisation, the application shall –		Attachment Number	Checked by Applicant
(a)	give the name, address, telefax number (if any) and telephone number of the applicant and the address to which correspondence relating to the application should be sent and, if the operator of the waste water works is a body corporate, the address of its registered office or principal office		
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,		
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the discharge point or points to which the application relates,		
(d)	state the population equivalent of the agglomeration to which the application relates,		
(e)	in the case of an application for the review of a certificate, specify the reference number given to the relevant certificate in the register,		
(f)	specify the content and extent of the waste water discharge, the level of treatment provided and the flow and type of discharge,		
(g)	give details of the receiving water body, its protected area status, if any, and details of any sensitive areas or protected areas, or both, in the vicinity of the discharge point or points or likely to be affected by the discharge concerned,		
(h)	identify monitoring and sampling points and indicate proposed arrangements for the monitoring of discharges and of the likely environmental consequences of any such discharges,		
(i)	in the case of an existing discharge, specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application,		
(j)	describe the existing or proposed measures, including emergency procedures, to prevent unauthorised or unexpected waste water discharges and to minimise the impact on the environment of any such discharges,		
(k)	give particulars of the location of the nearest downstream drinking water abstraction point or points to the discharge point or points associated with the waste water works,		
(l)	give details of any designation under any Council Directive or Regulations that apply in relation to the receiving waters,		
(m)	give details of compliance with any applicable monitoring requirements and treatment standards,		
(n)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work,		
(o)	give any other information as may be stipulated by the Agency, and		
(p)	be accompanied by such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		

# Cork County contd.

## Water Services Investment Programme 2007 - 2009

Serviced Land Initiative contd.	W/S	Est. Cost	Schemes to Advance through Planning cond.	W/S	Est. Cost
<b>Cork South contd.</b>			<b>Cork South</b>		
Mogeely, Castlemartyr & Ladysbridge Water Supply Scheme	W	2,566,000	Carrigtwohill Sewerage Scheme (G)	S	20,000,000
North Cobh Sewerage Scheme (G)	S	3,193,000	Cork Sludge Management (G)	S	14,420,000
Riverstick Water Supply Scheme (incl. Sewerage)	W/S	525,000	Cork Water Supply Scheme (Storage - Mount Emla, Ballincollig & Chetwind) (G)	W	8,500,000
Rochestown Water Supply Scheme	W	2,700,000	Inniscarra Water Treatment Plant (Sludge Treatment)(G)W		5,356,000
Saleen Sewerage Scheme	S	1,051,000	Macroom Sewerage Scheme	S	5,150,000
Youghal Water Supply Scheme	W	2,300,000	Minane Bridge Water Supply Scheme	W	1,421,000
<b>Cork West</b>			<b>Cork West</b>		
Castletownshend Sewerage Scheme	S	1,576,000	Bantry Regional Water Supply Scheme (Distribution)	W	9,455,000
		<b>50,797,000</b>	Cape Clear Water Supply Scheme	W	1,679,000
<b>Rural Towns &amp; Villages Initiative</b>			<b>Rural Towns &amp; Villages Initiative</b>		
<b>Cork North</b>			<b>Cork North</b>		
Buttevant Sewerage Scheme (Collection System)	S	2,446,000	Castletownbere Regional Water Supply Scheme	W	8,405,000
Doneraile Sewerage Scheme (Collection System)	S	1,738,000	Glengarriff Sewerage Scheme	S	2,500,000
			Roscarberry/Owenahincha Sewerage Scheme	S	1,576,000
			Skibbereen Regional Water Supply Scheme Stage 4	W	7,880,000
					<b>95,646,000</b>
<b>Cork South</b>			<b>Cork South</b>		
Innishannon (Ballinadee/ Ballinspittle/ Garrettstown) Water Supply Scheme	W	6,726,000	<b>Water Conservation Allocation</b>		<b>12,206,000</b>
			<b>Asset Management Study</b>		<b>300,000</b>
<b>Cork West</b>			<b>Cork West</b>		
Ballylicky Sewerage Scheme	S	2,158,000	<b>South Western River Basin District (WFD) Project<sup>1</sup></b>		<b>9,400,000</b>
Baltimore Sewerage Scheme	S	3,162,000			
Castletownbere Sewerage Scheme	S	3,202,000			
Schull Sewerage Scheme	S	3,523,000			
		<b>24,950,000</b>	<b>Programme Total</b>		<b>485,489,000</b>
<b>Schemes to Advance through Planning</b>					
<b>Cork North</b>					
Mitchelstown North Galtees Water Supply Scheme	W	3,152,000			
Mitchelstown Sewerage Scheme	S	3,000,000			
Newmarket Sewerage Scheme	S	3,152,000			

<sup>1</sup> This project is being led by Cork County Council on behalf of other authorities in the River Basin District

(H) Refers to a Hub as designated in the National Spatial Strategy

(G) Refers to a Gateway as designated in the National Spatial Strategy