Attachment B6

Comhairle Chontae Chorcaí
Cork County Council

County Hall,
Cork, Ireland.

Tel. No: (021) 4276891
Fax No: (021) 4276321

Web: http://www.corkcoco.com/

Ms. Valerie O'Sullivan,
A/Senior Executive Officer,
South Cork – City Hinterland,
Floor 4.

Direct Dial: 021-4285454
Fax: 021-4345425
Email: corporate.affairs@corkcoco.ie

27th March, 2006

Re: Report under Article 179(3)(b) of the Planning & Development Act, 2000
Report under Article 81 of the Planning & Development Regulations 2001

Construction of Wastewater Treatment Plant at Kilnamartyra, Co. Cork.

I refer to your letter dated 21st March, 2006, in connection with the above.

At the meeting of Cork County Council held on 27th March, 2006, the recommendation of the Southern Committee was approved.

KEVIN O'REGAN,
A/SENIOR EXECUTIVE OFFICER.

Comhairle Contae Chorcaí
Cork County Council

County Hall,
Cork, Ireland.
Tel: (021) 4276891 • Fax: (021) 4276321
Web: www.corkcoco.ie
Halla an Chontae,
Corcaigh, Éire.
Fón: (021) 4276891 • Faics: (021) 4276321
Suíomh Gréasáin: www.corkcoco.ie

Gus Cahill,
Administrative Officer,
Water Services Capital,
South Cork Rural,
Floor 4.

SOUTH CORK RURAL
29 MAR 2006
CORK COUNTY COUNCIL
COUNTY HALL - CORK

Direct Tel. No. (021) 4285524
Direct Fax No. (021) 4348334
e-mail: valerie.osullivan@corkcoco.ie

28th March, 2006.

Re; Report under Article 179(3)(b) of the Planning & Development Act, 2000.
Report under Article 81 of the Planning & Development Regulations, 2001.
Construction of Wastewater Treatment Plant at Kilnamartyra, Co. Cork.

At the meeting of the Council held on the 27th March, 2006 the recommendation of the Southern Committee was approved in respect of the above.

I attach letter dated 27th March, 2006 from the A/Senior Executive Officer, Corporate Affairs.

p.p. Mary Banks
VALERIE O'SULLIVAN,
A/Senior Executive Officer,
South Cork - City Hinterland,
Floor 4.

Attachment 68

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 • Faics: (021) 4532727
Suíomh Gréasáin: www.corkcoco.ie

Mr. Frank Clinton,
Program Manager,
Office of Climate, Licensing & Resource Use,
Environment Protection Agency,
Headquarters,
PO Box 3000,
Johnstown Castle Estate,
County Wexford.

16th December, 2009

Re: Waste Water Discharge (Authorisation) Regulations 2007 – fees payable in respect of applications to be submitted by 22nd December, 2009.

Dear Mr. Clinton,

I refer to the 72 certificate applications and 3 discharge authorisation licence applications which will be submitted by the council under the above regulations before the 22nd December next.

I note that the fees payable in respect of these applications amount to €246,000 and refer you to our letter of 7th November 2008 (sent by Ted O'Leary, Senior Executive Officer) seeking a rebate/reduction, as is provided for under Art 38 (3) of the regulations. I note that since that letter the council has paid a further € 570,000 in applications fees meaning that the total amount paid by the council to date amounts to € 1,245,000.

As you will appreciate, in the current economic climate, the amount payable in respect of this final batch of applications is a significant sum that was not budgeted for in 2009. Moreover we have paid a substantial amount in fees already and have made our case for a reduction/rebate. Accordingly, I must advise that we are not submitting payment in respect of these applications as we anticipate the rebate due to the council exceeds the fees payable.

Yours faithfully,

Louis Duffy,
Director of Service,
Environment & Emergency Services Directorate

Recycled

Attachment D1

Date	Sample	BOD (mg/l)	COD (mg/l O2)	TSS (mg/l)	PH	TN (mg/l N)	TP (mg/l P)	NH3-N (NH3-N)	OFG (mg/l)	Surfactants (mg/l)
12/05/2008	Influent			14						
12/05/2008	Effluent			6						
12/05/2008	MLSS			3910						
26/06/2008	Influent	8	24.4	18	7.36	5.82	0.5	2.22		
26/06/2008	Effluent	3	10	4	7.42	4.6	0.07	0.1		
20/07/2008	Influent		115	108	7.52	6.1	0.62	2.9		
20/07/2008	Effluent		21	4	7.31	4	0.02	0.2		
23/07/2008	Influent		122.5	20	7.62	7.1	1.05	2.2		
23/07/2008	Effluent		55	2	7.24	4.7	0.73	3.2		
23/07/2008	MLSS			2200						
08/08/2008	Influent		157	146	7.43	10.6	2.45	1.3		
08/08/2008	Effluent		23.2	2	7.32	5	0.16	0.7		
08/08/2008	MLSS			860						
21/08/2008	Influent		58	226	7.88	7.8	0.7	1.5		
21/08/2008	Effluent		15.3	4	7.29	4.9	0.23	0.1		
21/08/2008	MLSS			1334						
16/10/2008	Influent	20	81	64	7.58	6.2	0.7	0.8		
16/10/2008	Effluent	3	12.6	4	7.23	3.9	0.25	0.9		
06/11/2008	Influent	28	111	54	7.26	9.5	3.3	1.6		
06/11/2008	Effluent	2	4.3	14	7.19	6.4	0.29	0.3		
06/11/2008	MLSS			820						
27/11/2008	Influent		48.9	70	7.38	5.2	1.05	4.6		
27/11/2008	Effluent		21.5	8	7.26	5.5	0.13	0.2		
27/11/2008	MLSS			2544						
27/01/2009	Influent		126	26	7.42	4.2	1.15	4.3		
27/01/2009	Effluent	4	21.4	4	7.31	2.6	0.21	2.9		
26/02/2009	Influent	36	155	124	7.39	11.5	2.35	2.9	<10	0.04
26/02/2009	Effluent	3	12.3	2	7.2	6.3	0.57	0.2	<10	0.04
26/03/2009	Influent		147	174	7.37	7.6	3.15	7.2		
26/03/2009	Effluent		15.2	4	7.19	6.3	0.65	0.9		
26/03/2009	MLSS		604	604						
23/04/2009	Influent	13	22	11	7.5	6.1	0.7	2.4		
23/04/2009	Effluent	< 4	< 15	< 5	7.5	7.6	0.1	< 0.1		

Attachment 02

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING	VERIFIED
SW01-GNAM	Primary	Cork County Council	River	Sullane	Good	125922	74011	N

Attachment E2

Date	Sample	BOD (mg/l)	COD (mg/l O2)	TSS (mg/l)	PH	TN (mg/l N)	TP (mg/l P)	NH3-N (NH3-N)	OFG (mg/l)	Surfactants (mg/l)
12/05/2008	Influent			14						
12/05/2008	Effluent			6						
12/05/2008	MLSS			3910						
26/06/2008	Influent	8	24.4	18	7.36	5.82	0.5	2.22		
26/06/2008	Effluent	3	10	4	7.42	4.6	0.07	0.1		
20/07/2008	Influent		115	108	7.52	6.1	0.62	2.9		
20/07/2008	Effluent		21	4	7.31	4	0.02	0.2		
23/07/2008	Influent		122.5	20	7.62	7.1	1.05	2.2		
23/07/2008	Effluent		55	2	7.24	4.7	0.73	3.2		
23/07/2008	MLSS			2200						
08/08/2008	Influent		157	146	7.43	10.6	2.45	1.3		
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21/08/2008	Effluent		15.3	4	7.29	4.9	0.23	0.1		
21/08/2008	MLSS			1334						
16/10/2008	Influent	20	81	64	7.58	6.6	0.7	0.8		
16/10/2008	Effluent	3	12.6	4	7.23	3.9	0.25	0.9		
06/11/2008	Influent	28	111	54	7.26	9.5	3.3	1.6		
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27/11/2008	Influent		48.9	70	7.38	5.2	1.05	4.6		
27/11/2008	Effluent		21.5	8	7.26	5.5	0.13	0.2		
27/11/2008	MLSS			2544						
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27/01/2009	Effluent	4	21.4	4	7.31	2.6	0.21	2.9		
26/02/2009	Influent	36	155	124	7.39	11.5	2.35	2.9	<10	0.04
26/02/2009	Effluent	3	12.3	2	7.2	6.3	0.57	0.2	<10	0.04
26/03/2009	Influent		147	174	7.37	7.6	3.15	7.2		
26/03/2009	Effluent		15.2	4	7.19	6.3	0.65	0.9		
26/03/2009	MLSS		604	604						
23/04/2009	Influent	13	22	11	7.5	6.1	0.7	2.4		
23/04/2009	Effluent	< 4	< 15	< 5	7.5	7.6	0.1	< 0.1		

Irish National Accreditation Board

Accreditation Certificate

Cork County Council

Wastewater Testing Laboratory, Inniscarra, Co. Cork

Testing Laboratory

Registration number: **016T**

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

(This Certificate must be read in conjunction with the Annexed Schedule of Accreditation)

Date of award of accreditation: **01:10:2002**
Date of last renewal of accreditation: **20:09:2007**
Expiry date of this certificate of accreditation: **20:09:2012**

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

Manager: Tom Dempsey — Mr Tom Dempsey

Chairperson: Máire C Walsh — Dr Máire Walsh

Issued on 20th September 2007

Organisations are subject to annual surveillance and are re-assessed every five years. The renewal date on this Certificate confirms the latest date of renewal of accreditation. To confirm the validity of this Certificate, please contact the Irish National Accreditation Board.
The INAB is a signatory of the European co-operation for Accreditation (EA) Testing Multilateral Agreement (MLA) and the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement.

Irish National Accreditation Board

Wilton Park House, Wilton Place, Dublin 2, Ireland
Tel +353 1 607 3003 Fax +353 1 607 3109
E-mail inab@inab.ie Web www.inab.ie

Schedule of Accreditation

ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO.016T

(Annex to Accreditation Certificate)

Permanent Laboratory:

Category A

CORK COUNTY COUNCIL

Chemistry Testing Laboratory

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

Irish National Accreditation Board

Wilton Park House, Wilton Place, Dublin 2, Ireland
Tel: +353 1 607 3003 Fax: +353 1 607 3109
E-mail: inab@inab.ie Web: www.inab.ie

Schedule of Accreditation

ISO 17025 INAB ACCREDITED TESTING
DETAILED IN SCOPE REG NO.016T

Permanent Laboratory:
Category A

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

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

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

Testing and Calibration Categories:

Category A: Permanent laboratory calibration and testing where the laboratory is erected on a fixed location for a period expected to be greater than three years.

Category B: Site calibration and testing that is performed by staff sent out on site by a permanent laboratory that is accredited by the Irish National Accreditation Board.

Category C: Site calibration and testing that is performed in a site/mobile laboratory or by staff sent out by such a laboratory, the operation of which is the responsibility of a permanent laboratory accredited by the Irish National Accreditation Board.

Category D: Site calibration and testing that is performed on site by individuals and organisations that do not have a permanent calibration/testing laboratory. Testing may be performed using

(a) portable test equipment
(b) a site laboratory
(c) a mobile laboratory or
(d) equipment from a mobile or site laboratory

Standard Specification or Test Procedure Used:

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

Glossary of Terms

Facilities:

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

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

Scope of Accreditation

Cork County Council

Chemical Testing Laboratory

Permanent Laboratory:
Category A

INAB Classification number (P9) Materials/products tested		Type of test/properties measured Range of measurement	Standard specifications Equipment/techniques used
766	**Waters**	Chemical analysis:	Documented in-house methods based on Standard Methods for the Examination of Water & Wastewater 21 st Edition APHA (See Note 1)
.01	Waters for domestic purposes *Surface and ground waters*	Biochemical Oxygen Demand 2 - 145,000 mg/l	CP No. 1 *Membrane electrode*
		Chloride 5 - 1,000 mg/l	CP No. 7 Argentometric method
		ph 2 - 12	CP No. 5 Electrometry
		Suspended Solids 0.5 - 17,500 mg/l	CP No. 3 Gravimetric
		Chemical Oxygen Demand 21 - 135 mg/l 120 - 670,000 mg/l	CP No. 6 Reflux - colourmetric method
		Total phosphorus 0.2 - 5,300 mg/l	US-EPA Approved method/HACH Method CP No.20
		Ammonia 0.1 - 1,000 mg/l NH_3 - N	Documented in-house method CP22 by Konelab based on Method for the Examination of Waters and Associated Material HMSO:1981

Scope of Accreditation

ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO.016T

Cork County Council

Chemical Testing Laboratory

Permanent Laboratory:

Category A

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

Scope of Accreditation

ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO.016T

Cork County Council

Chemical Testing Laboratory

Permanent Laboratory:
Category A

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

Notes
1. APHA American Public Health Association, USA, 21st Edition

Scope of Accreditation

ISO 17025 IVNAB ACCREDITED TESTING
DETAILED IN SCOPE REG NO.016T

Cork County Council

Chemical Testing Laboratory

Permanent Laboratory:
Category A

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

Notes
1. APHA American Public Health Association, USA, 21st Edition

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
SW01	Primary	Sampling	125922	74011	N
aSW01u	Upstream	Sampling	122720	75579	Y
aSW01d	Downstream	Sampling	126047	74085	Y

Attachment E3

Attachment E4

Attachment E4 Kilnamarytra Inlet Table E4

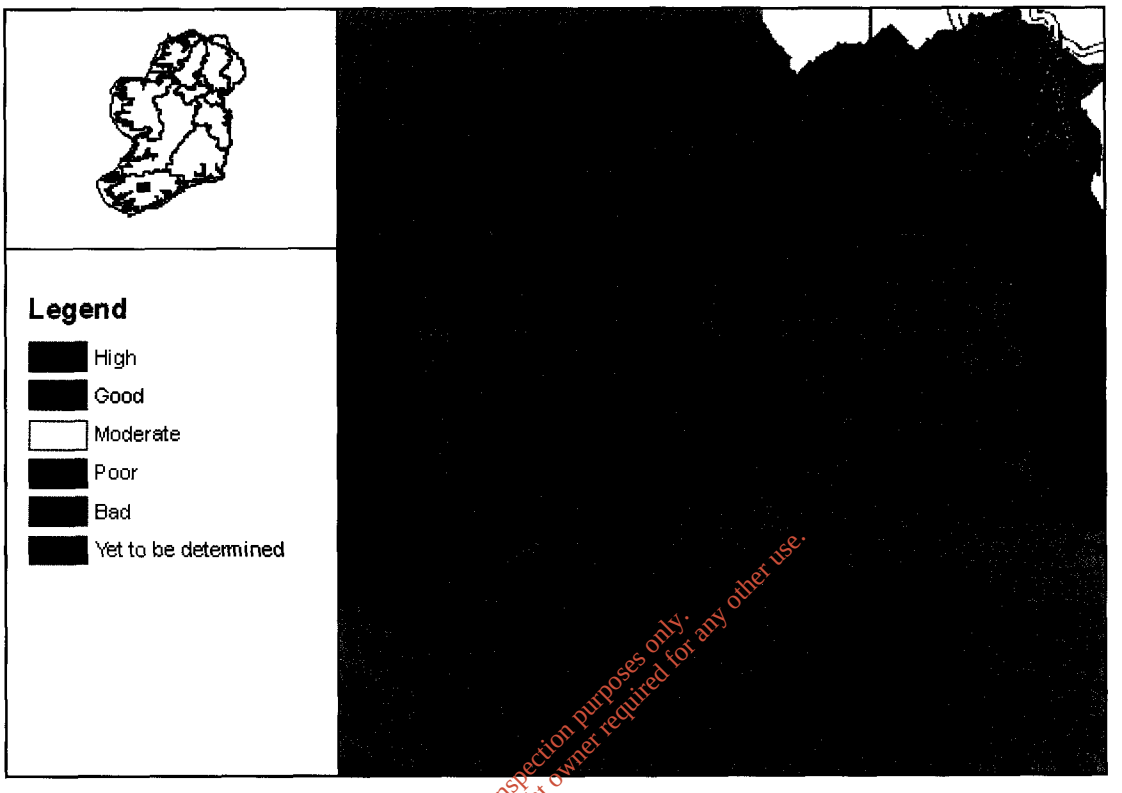
Sample Date	06/05/2009	06/05/2009	06/05/2009	06/05/2009	
Sample	Influent	Effluent	Upstream	Downstream	Average
Sample Code	GT618	GT617	GT619	GT620	
Flow M^3/Day	*	*	*	*	
pH	7.5	7.7	7.5	7.7	
Temperature °C	*	*	*	*	
Cond 20°C	328	275	98	110	
SS mg/L	*	*	*	*	
NH_3 mg/L	8.0	<0.1	<0.1	<0.1	
BOD mg/L	25	*	1	<1.0	
COD mg/L	32	38	<21	<21	
TN mg/L	11.9	4.214	0.53	0.68	
Nitrite mg/L	0.102	<0.10	<0.10	<0.10	
Nitrate mg/L	1.72	4.87	<0.50	<0.50	
TP mg/L	1.14	<0.05	<0.05	<0.05	
O-PO4-P mg/L	0.81	<0.05	<0.05	<0.05	
SO4 mg/L	<30	<30	<30	<30	
Phenols µg/L	<0.10	<0.10	<0.10	<0.10	
Atrazine µg/L	<0.01	<0.01	<0.01	<0.01	
Dichloromethane µg/L	<1	<1	<1	<1	
Simazine µg/L	<0.01	<0.01	<0.01	<0.01	
Toluene µg/L	<0.28	<0.28	<0.28	<0.28	
Tributyltin µg/L	*	*	*	*	
Xylenes µg/L	<1	<1	<1	<1	
Arsenic µg/L	<0.96	<0.96	<0.96	<0.96	
Chromium ug/L	<20	<20	<20	<20	
Copper ug/L	23	<20	<20	<20	
Cyanide µg/L	<5	<5	<1	<5	
Fluoride µg/L	<100	<100	<100	<100	
Lead ug/L	<20	<20	<20	<20	
Nickel ug/L	<20	<20	<20	<20	
Zinc ug/L	29	<20	<20	<20	
Boron ug/L	<20	<20	<20	<20	
Cadmium ug/L	<20	<20	<20	<20	
Mercury µg/L	<0.2	<0.2	<0.2	<0.2	
Selenium µg/L	2.8	<0.74	<0.74	2.1	
Barium ug/L	61	46.64	48.66	50.37	

Attachment F1

water matters
"Help us plan!"

[redacted]

Full Report for Waterbody AnSulan, Trib of Lee



Date Reported to Europe: 22/12/2008

Date Report Created 30/04/2009

water matters
"Help us plan!"

[redacted]

Summary Information:

WaterBody Category:	Subbasin Waterbody
WaterBody Name:	AnSulan, Trib of Lee
WaterBody Code:	IE_SW_19_915
Overall Status:	[redacted]
Overall Objective:	[redacted]
Overall Risk:	2b Not At Risk
Applicable Supplementary Measures:	Unsewered; Urban & Industrial; Morphology; Forestry;

south western river basin district

Report data based upon Draft RBMP, 22/12/2008.

Date Reported to Europe: 22/12/2008

Date Report Created 30/04/2009

water matters
"Help us plan!"

[redacted]

Status Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: AnSulan, Trib of Lee

WaterBody Code: IE_SW_19_915

Overall Status Result: [redacted]

south western river basin district

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

Date Reported to Europe: 22/12/2008

Date Report Created 30/04/2009

water matters
"Help us plan!"

Risk Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: AnSulan, Trib of Lee

WaterBody Code: IE_SW_19_915

Overall Risk Result: 2b Not At Risk

south western river basin district

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

Date Reported to Europe: 22/12/2008

Date Report Created 30/04/2009

water matters
"Help us plan!"

[redacted]

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

Date Reported to Europe: 22/12/2008

Date Report Created 30/04/2009

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[redacted]

Objectives Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: AnSulan, Trib of Lee

WaterBody Code: IE_SW_19_915

Overall Objective: [redacted]

south western river basin district

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

Date Reported to Europe: 22/12/2008

Date Report Created 30/04/2009

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Basic Measures Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: AnSulan, Trib of Lee

WaterBody Code: IE_SW_19_915

south western river basin district

	Basic Measures Description	Applicable
	Key Directives	
BA	Bathing Waters Directive	No
BI	Birds Directive	No
HA	Habitats Directive	Yes
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
	Other Stipulated Measures	
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 30/04/2009

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Urban and Industrial Discharges Supplementary Measures Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: AnSulan, Trib of Lee

WaterBody Code: IE_SW_19_915

south western river basin district

	Point discharges to waters from municipal and industrial sources	Result
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.	Yes
PB2	Basic Measure 2 - Optimise the performance of the waste water treatment plant by the implementation of a performance management system.	Yes
PB3	Basic Measure 3 - Revise existing Section 4 license conditions and reduce allowable pollution load.	Yes
PB4	Basic Measure 4 - Review existing IPPC license conditions and reduce allowable pollution load.	Yes
PB5	Basic Measure 5 - Investigate contributions to the collection system from unlicensed discharges.	Yes
PB6	Basic Measure 6 - Investigate contributions to the collection system of specific substances known to impact ecological status.	Yes
PB7	Basic Measure 7 - Upgrade WWTP to increase capacity.	Yes
PB8	Basic Measure 8 - Upgrade WWTP to provide nutrient removal treatment.	No
PS1	Supplementary Measure 1 - Measures intended to reduce loading to the treatment plant.	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

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[redacted]

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

Date Reported to Europe: 22/12/2008

Date Report Created 30/04/2009

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Physical Modifications Supplementary Measures Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: AnSulan, Trib of Lee

WaterBody Code: IE_SW_19_915

south western river basin district

	Physical Modifications Supplementary Measures	Applicable
	European Code	IE_SW_19_915
	Reduce	
SM1	Codes of Practice	Yes
SM2	Support for voluntary initiatives	Yes
	Remediate	
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

Date Reported to Europe: 22/12/2008

Date Report Created 30/04/2009

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Unsewered Properties Supplementary Measures Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: AnSulan, Trib of Lee

WaterBody Code: IE_SW_19_915

south western river basin district

	Supplementary Measures for Unsewered Areas	Applicable
SP1	Ammend 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

Date Reported to Europe: 22/12/2008

Date Report Created 30/04/2009

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Forestry Measures Report

WaterBody Category: Subbasin Waterbody

WaterBody Name: AnSulan, Trib of Lee

WaterBody Code: IE_SW_19_915

south western river basin district

	Forestry Measures for Forestry	Applicable
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
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
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

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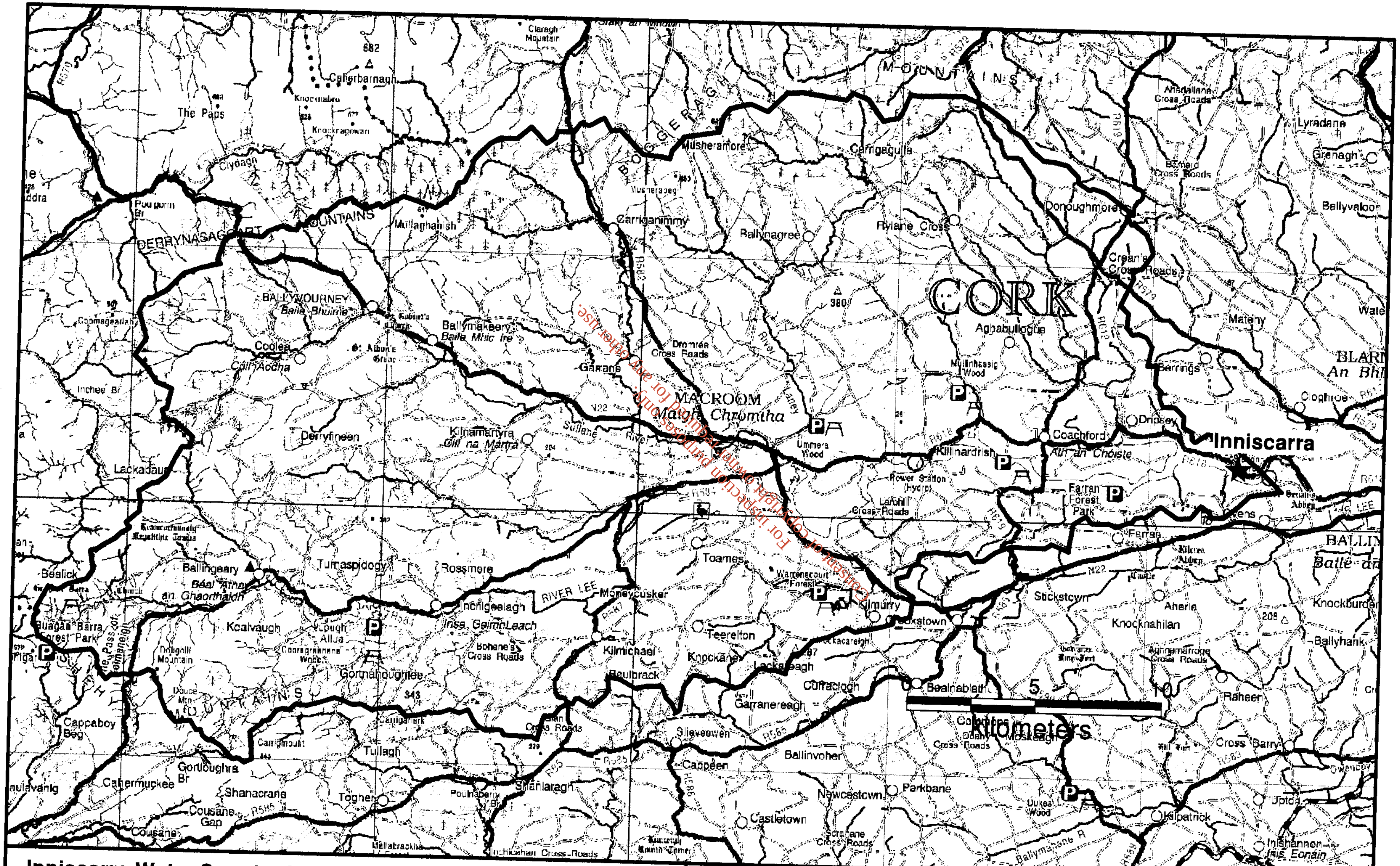
SF18	Eutrophication - Manage catchment drainage to increase residence times and soil wetting, including no drainage in some locations	No
SF19	Sedimentation - Establish riparian zone management prior to clearfelling	No
SF20	Sedimentation - Enhance sediment control	No
SF21	Sedimentation - Manage catchment 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

Date Reported to Europe: 22/12/2008

Date Report Created 30/04/2009

ABS_CD	AGG_SERVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
No Code	Macroom Urban	1,300	No Label Assigned	10,500	133831	73005	No
0500PUB3401	City & Harbour - 135,000	228,000	No Label Assigned	38,500	153486	72314	

Attachment F2



Inniscarra Water Supply, Catchment Outline

★ Abstraction Location

— Catchment Outline

N

1899 ~ 1999

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

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
Total Surface Water Catchment Risk Score		53
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	**(0-2-2-2)**	**-6**
Section 10 - Treatment Works Operation	(-2+1-4+4-2+2+4)	3
Total Surface Water - Treatment and Supply Risk Score		-23
Surface Water Risk Assessment Score		30
Population		111,000
Population Weighting Factor (0.4 x log10(population))		2.018129192
Final Weighted Risk Assessment Score		**60.54387575**
Water Supply Risk Classification		**Moderate**

SURFACE WATER - Macroom

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.

Surface Water Catchment Risk Scores	**Section Score**	**Total Score**
Section 1 - Animals within the Catchment	21	21
Section 2 - Agricultural Practices within the Catchment	26	26
Section 3 - Discharges to the Catchment/Water Source	13	13
Section 4 - Water Source Type	8	8
Section 5 - Catchment Inspections	3	3
Section 6 - Raw Water Intake Management for Abstractions	2	2
Total Surface Water Catchment Risk Score		73
Surface Water - Treatment and Supply Risk Score		
Section 7 - Water Treatment Processes		-10
Section 8a - Treatment Works Monitoring of Coagulation and Filtration		5
Section 8b - Treatment Works Monitoring of Coagulation and Filtration		0
Section 8c - Treatment Works Monitoring of Coagulation and Filtration		8
Section 8d - Treatment Works Monitoring of Coagulation and Filtration		0
Section 8e - Treatment Works Monitoring of Coagulation and Filtration		0
Section 8f - Treatment Works Monitoring of Coagulation and Filtration		0
Section 9 - Rapid Gravity and Pressure Filter Works Performance		-2
Section 10 - Treatment Works Operation		-4
Total Surface Water - Treatment and Supply Risk Score		-3
Surface Water Risk Assessment Score		70
Population		3500
Population Weighting Factor (0.4 x log10(population))		1.4176272
Final Weighted Risk Assessment Score		**99.233905**
Water Supply Risk Classification		**Very High Risk**

Section 1 - Animals Within the Catchment

1.1	Cattle/calves at less than or equal to one livestock unit per hectare of forage area *	5	5
	Cattle/calves at more than one one livestock unit per hectare of forage area*	10	
	No cattle/calves in the catchment	0	
1.2	Sheep/lambs at less than or equal to one one livestock unit per hectare of forage area *	5	10
	Sheep/lambs at more than one one livestock unit per hectare of forage area *	10	
	No sheep/lambs in the catchment	0	
1.3	Wild or farmed deer in the catchment	2	2
	No wild or farmed deer in the catchment	0	
1.4	Pig farms in the catchment	2	0
	No pig farms in the catchment	0	
1.5	Animals have direct access to water sources including feeder streams	4	4
	Fencing prevents access to water sources including feeder streams	-4	
1.6	High numbers of birds	2	0
1.7	Any other farmed animals or birds	1	0
			21

Section 2 - Agricultural Practices Within the Catchment

2.1	Slurry spraying within the catchment	6	6
2.2	Dung spreading within the catchment	3	3
2.3	Slurry **or** dung stores	3	3
2.4	Sheep pens **or** cattle sheds	6	6
2.5	Lambing **or** calving on the catchment	8	8
2.6	Full compliance with the Good Agricultural Practice Regulations verified by catchment inspection	-6	0
			26

Section 3 - Discharges to the Catchment/Water Source

3.1	Population equivalent served by individual on-site wastewater treatment systems < 100 PE	4	6
	Population equivalent served by individual on-site wastewater treatment systems > 100 PE	6	
3.2	On-site wastewater treatment systems all known to be functioning properly	-2	0
3.3	Flooding of septic tanks on flood plains	4	0
3.4	Population equivalent served by all wastewater works <500	4	5
	Population equivalent served by all wastewater works 500 to 5,000	5	
	Population equivalent served by all wastewater works 5,001 to 20,000	6	
	Population equivalent served by all wastewater works 20,001 to 50,000	7	
	Population equivalent served by all wastewater works > 50,000	8	
3.5	Storm water overflows	2	2
3.6	Section 4 or Integrated Pollution Prevention Control (IPPC) Licence discharge from intensive agricultural activity or agriculturally related discharge	2	0
3.7	All wastewater treatment plants complying with the UWWT Regulations quality standards	-1	0
3.8	UV inactivation at outlet of wastewater treatment plants	-2	0
			13

Section 4 - Water Source Type

4.1	Upland reservoir/lake	2	8
	Lowland long term storage reservoir/lake	4	
	Upland river or stream - bankside storage	5	
	Upland river or stream – direct abstraction	6	
	Lowland river or stream – direct abstraction or bankside storage	8	
			8

Section 5 - Catchment Inspections

5.1	Catchment inspections carried out at least monthly	-3	6
	Catchment inspections carried out less frequently	6	
5.2	Procedures in place to deal with irregularities on the catchment	-3	-3
			3

Section 6 - Raw Water Intake Management for Abstractions

6.1	No appropriate water quality monitor on intake	3	3
	Appropriate water quality monitor on intake that is alarmed and connected to telemetry	-2	
6.2	Automatic intake shut down when poor water quality	-4	-1
	Manual intake shut down when poor water quality	-1	
	No intake shut down when poor water quality	3	
			2

Section 7 - Water Treatment Processes

7.1	Simple sand filtration (not slow sand filtration)	8	-10
	Simple sand filtration (**not** slow sand filtration) with UV treatment	6	
	Coagulation followed by DAF/sedimentation and filtration	-10	
	Coagulation followed by DAF/sedimentation and filtration followed by UV treatment	-16	
	Coagulation followed by rapid gravity or pressure filtration (no flotation or sedimentation)	-7	
	Coagulation followed by rapid gravity or pressure filtration (no flotation or sedimentation) followed by UV treatment	-13	
	Slow sand filtration	-9	
	Slow sand filtration followed by UV treatment	-15	
	Membrane Filtration (DWI approved)	-16	
	Membrane filtration (Not DWI approved)	-2	
			-10

Section 8 - Treatment Works Monitoring of Coagulation and Filtration

8.1	Manual coagulant dose control – not flow proportional	5	5
	Manual coagulant pH control	5	
	Coagulant pH monitored and alarmed	-5	
			5

Section 8 - Treatment Works Monitoring of Coagulation and Filtration

8.2	Clarified water turbidity monitor/particle counters	-1	
	Clarified water turbidity monitor/particle counters with alarm	-2	
			0

Section 8 - Treatment Works Monitoring of Coagulation and Filtration

8.3	Turbidity meter/particle counter on each filter with alarm on telemetry	-5	0
	Turbidity meter/particle counter on each filter but no alarm on telemetry	0	
	One turbidity meter/particle counter shared by more than one filter with alarm on telemetry	-2	
	One turbidity meter/particle counter shared by more than one filter but no alarm on telemetry	2	
	No turbidity meters/particle counters monitoring filter performance	10	
8.4	Final water turbidity meter/particle counter with alarm on telemetry	-2	5
	Final water turbidity meter/particle counter but no alarm on telemetry	2	
	No final water turbidity meter/particle counter	5	
8.5	Continuous residual coagulant monitor on combined filtrate or works outlet with alarm	-5	5
	Continuous residual coagulant monitor on combined filtrate or works outlet but no alarm	-1	
	No continuous residual coagulant monitor on combined filtrate or works outlet	5	
8.6	Routine discrete monitoring of treated water for turbidity/residual coagulant	-2	-2
	No routine discrete monitoring of treated water for turbidity/residual coagulant	2	
8.7	Turbidity of backwash supernatant monitored when recycled	-2	0
	Turbidity of backwash supernatant not monitored when recycled	2	
			8

Section 8 - Treatment Works Monitoring of Coagulation and Filtration

8.8	Turbidity meter/particle counter on each filter with alarm on telemetry	-5	
	Turbidity meter/particle counter on each filter but no alarm on telemetry	0	
	One turbidity meter/particle counter shared by more than one filter with alarm on telemetry	-2	
	One turbidity meter/particle counter shared by more than one filter but no alarm on telemetry	2	
	No turbidity meters/particle counters monitoring filter performance	10	
8.9	Final water turbidity meter/particle counter with alarm on telemetry	-2	
	Final water turbidity meter/particle counter but no alarm on telemetry	2	
	No final water turbidity meter/particle counter	5	
8.1	Filters matured and filtrate analysed for turbidity, coliforms and *Cryptosporidium* during maturation	-4	
	Filters matured but no analysis carried out on filtrate	5	
	Filters not matured	15	
			0

Section 8 - Treatment Works Monitoring of Coagulation and Filtration

8.11	Plant monitored and alarmed for integrity	-10	
	Plant monitored for integrity but not alarmed	0	
	Plant not monitored for integrity	10	
8.12	Particle counter used continuously to monitor filter performance	-5	
			0

Section 8 - Treatment Works Monitoring of Coagulation and Filtration

8.13	Plant monitored for integrity and correct UV dosage	0	
	Plant monitored and alarmed for integrity and correct UV dosage	-10	
	Plant neither monitored nor alarmed	10	
8.14	Influent turbidity consistently < 0.2 NTU	-6	
	Influent turbidity consistently < 1.0 NTU	-3	
	Influent turbidity consistently > 1.0 NTU	-1	
			0

Section 9 - Rapid Gravity and Pressure Filter Works Performance

9.1	Final water turbidity increases by more than 50%, excluding normal backwash period or turbidity in the final water >1.0 NTU	4	0
	Treated water turbidity increases by less than 50%, excluding normal backwash period and turbidity in the final water <1.0 NTU	0	
9.2	Media loss from any filter has brought media depth below design level	6	0
	Media depth above minimum design level with audit trail maintained	-2	
9.3	Signs of media cracking on any filter	4	0
9.4	All filters have been drained, inspected and any necessary remedial action taken within last year	-2	0
9.5	Air scour and backwash maintained and operating efficiently as per maintenance manual	-2	-2
			-2

Note: DAF system in Macroom. Not ordainary RGF. Therefore score zero for 9.2, 9.3 and 9.4

Section 10 - Treatment Works Operation

10.1	Plant with documented management systems that includes procedures and process control manuals	-2	0
	Process control manuals specific to works available	-1	-1
	Process control manuals specific to works not available	1	
10.2	Auditable action plans available for dealing with deviations in quality and evidence of implementation of the plan	-1	1
	Auditable action plans not available for dealing with deviations in quality	1	
10.3	Slow start facility on filters operational	-4	0
	No slow start facility on filters, or slow start facility not operational	4	
10.4	Filters run to waste for appropriate period after backwash	-6	0
	Filters run to head of works for a period following backwash	-4	
	Filters not run to waste or head of works for a period following backwash	4	
10.5	Backwash water and/or sludge supernatant **has** to be recycled	2	-2
	Other disposal route available for backwash water and sludge supernatant	-2	
10.6	Water flow through works when operating has not increased by >10% in <30 minutes in last 12 months	-2	-2
	Water flow through works when operating has increased by >10% in <30 minutes in last 12 months	2	
10.7	Flow through works above design flow for >10% of time in last 12 months	4	0
	Flow through works above design flow for ≤10% of time in last 12 months	0	
	Flow through works >130% above design flow for >50% of time in last 12 months	6	
10.8	Filters bypassed during the year	6	0
			-4