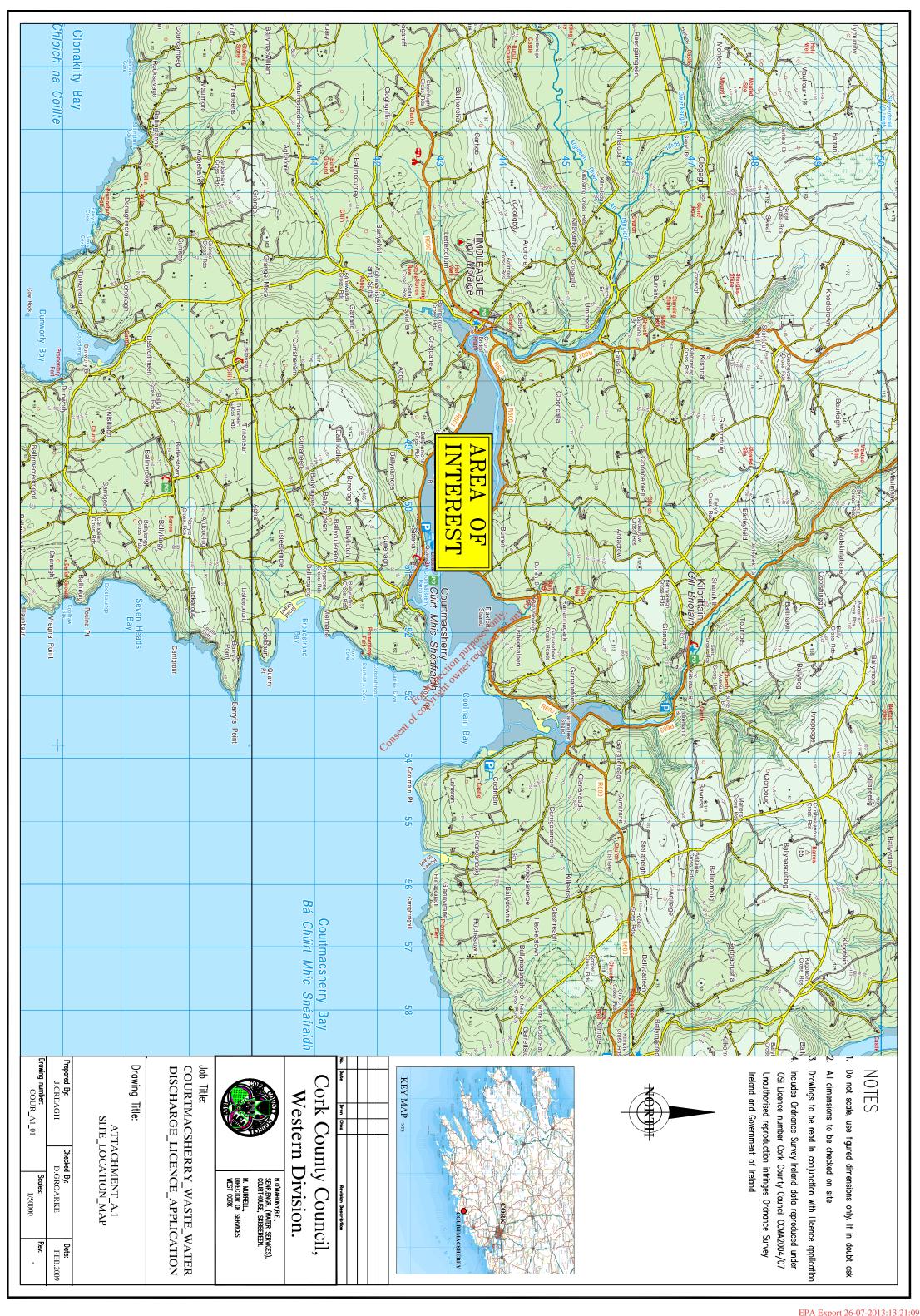
# **ATTACHMENT No A.1**

Non-Technical Summary Supporting Information

Summary Supporting Information

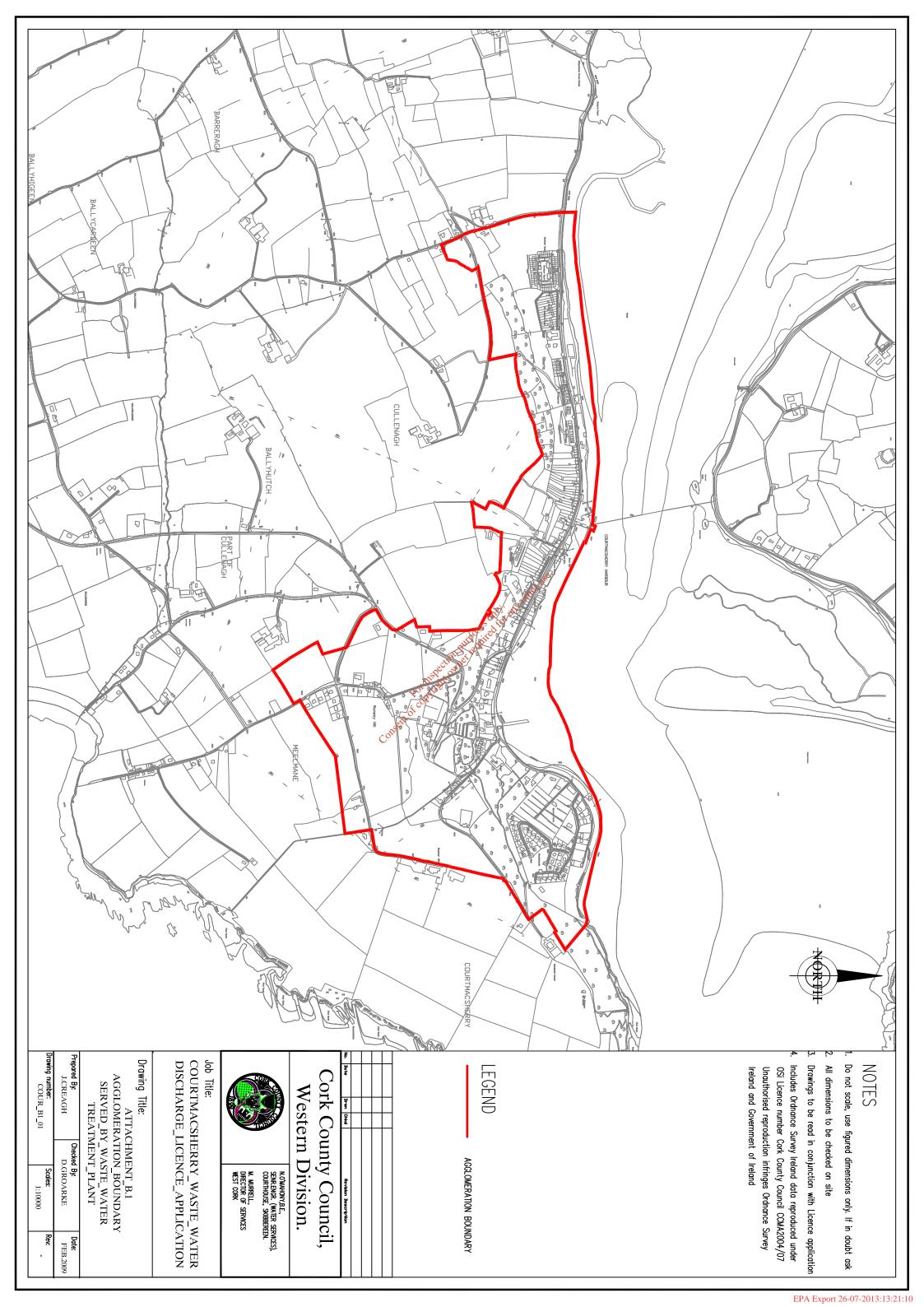
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# ATTACHMENT No B.1 AGGLOMERATION BOUNDARY

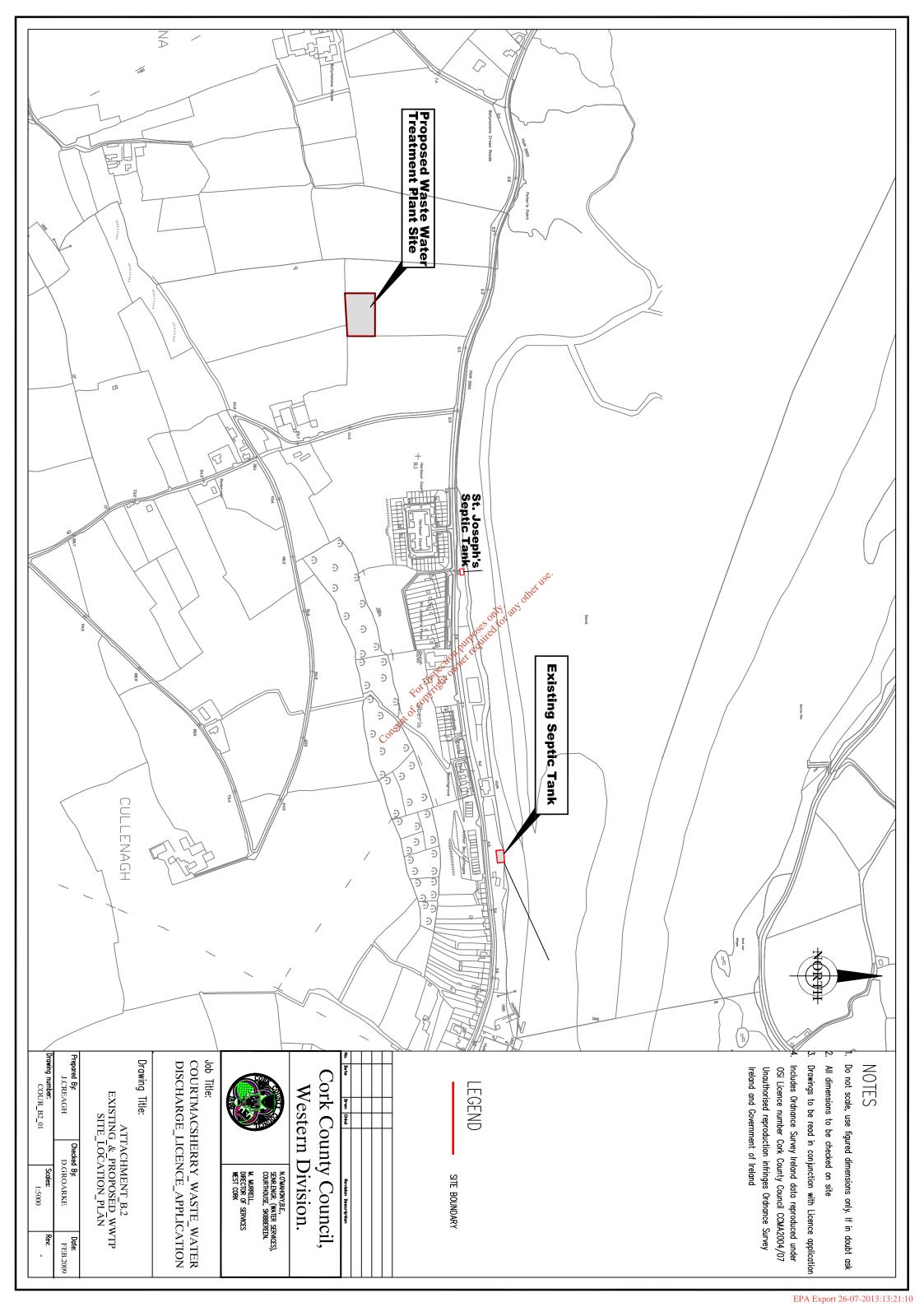
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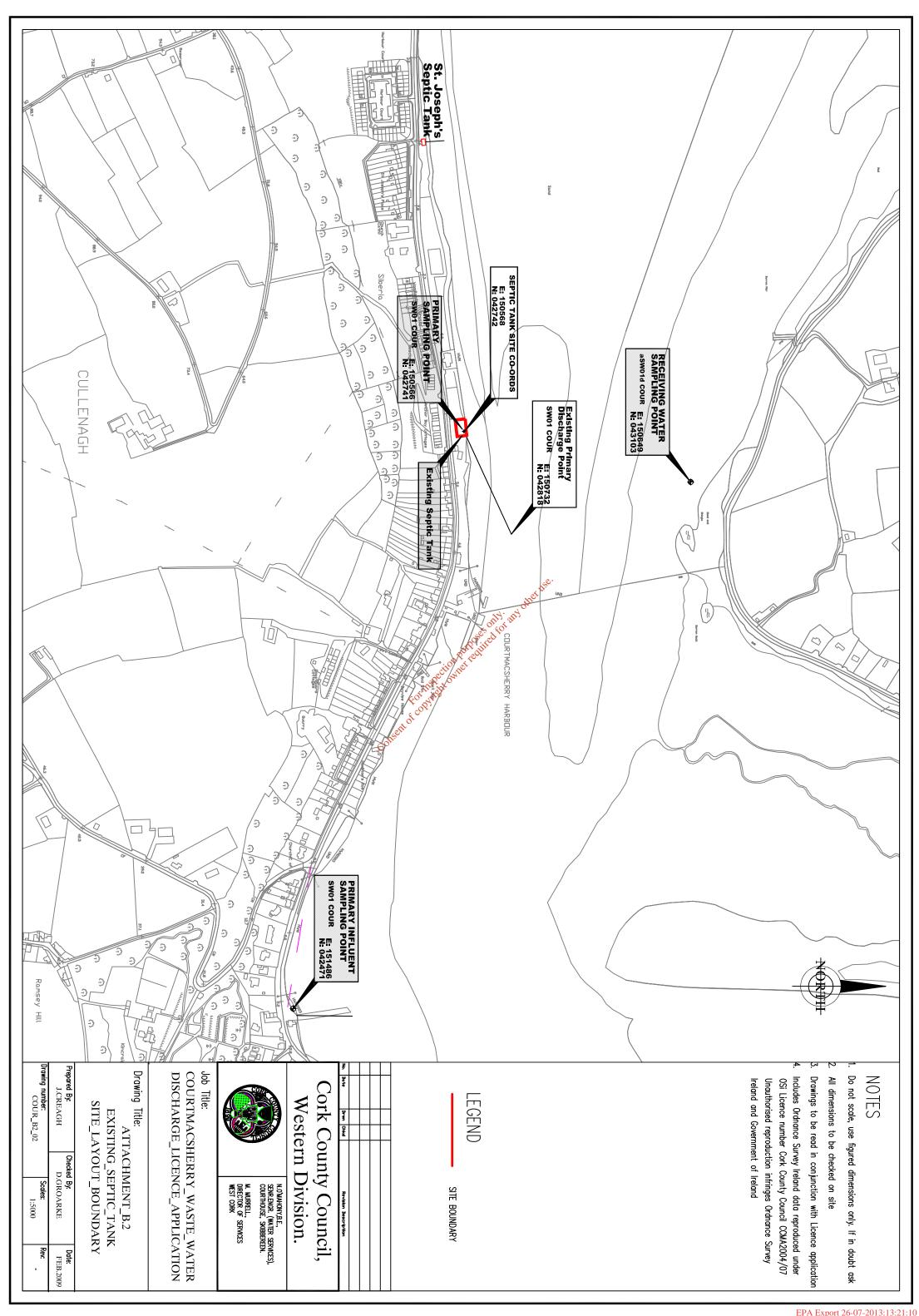


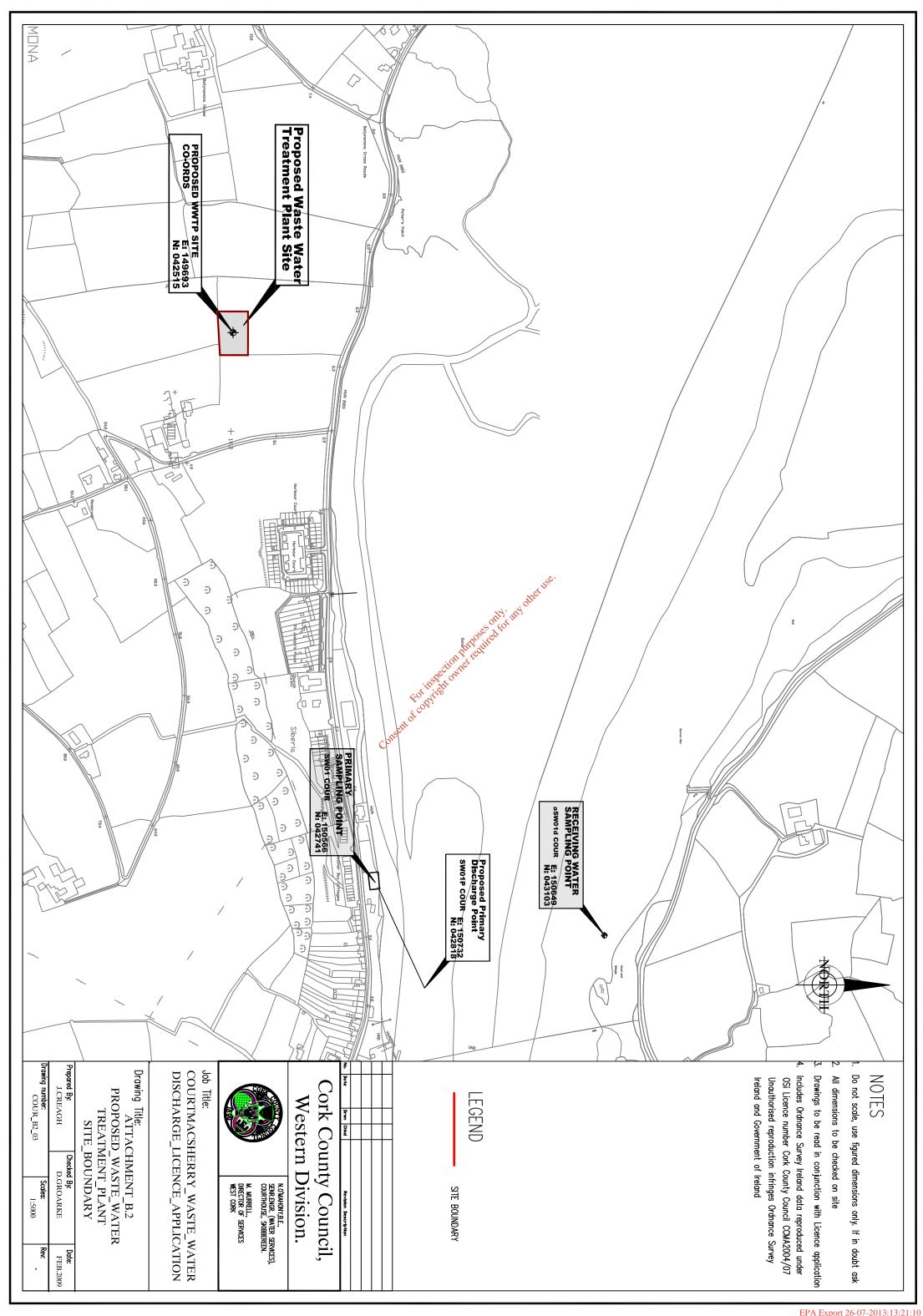
# ATTACHMENT No B.2

WWTP SITE BOUNDARY

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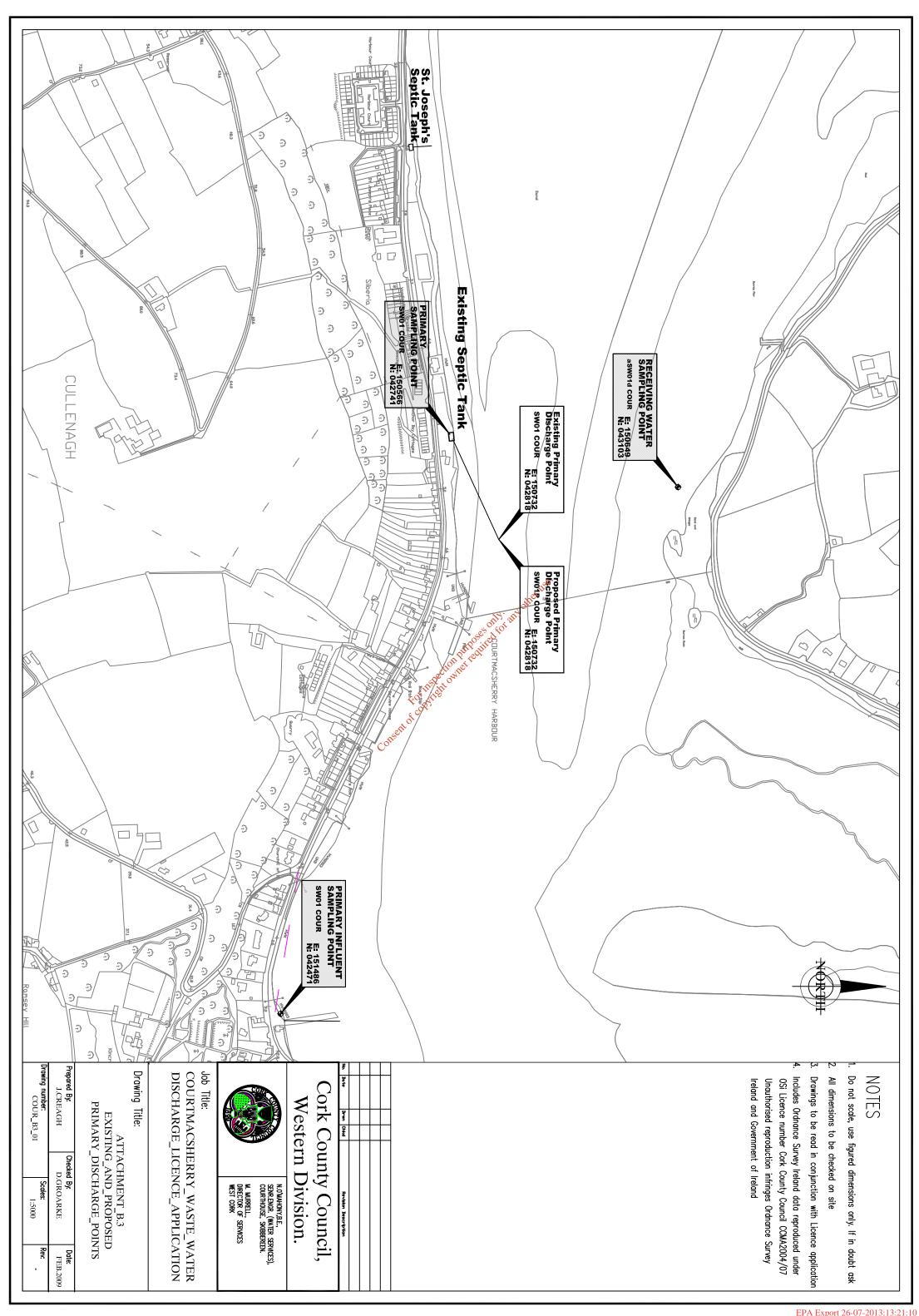






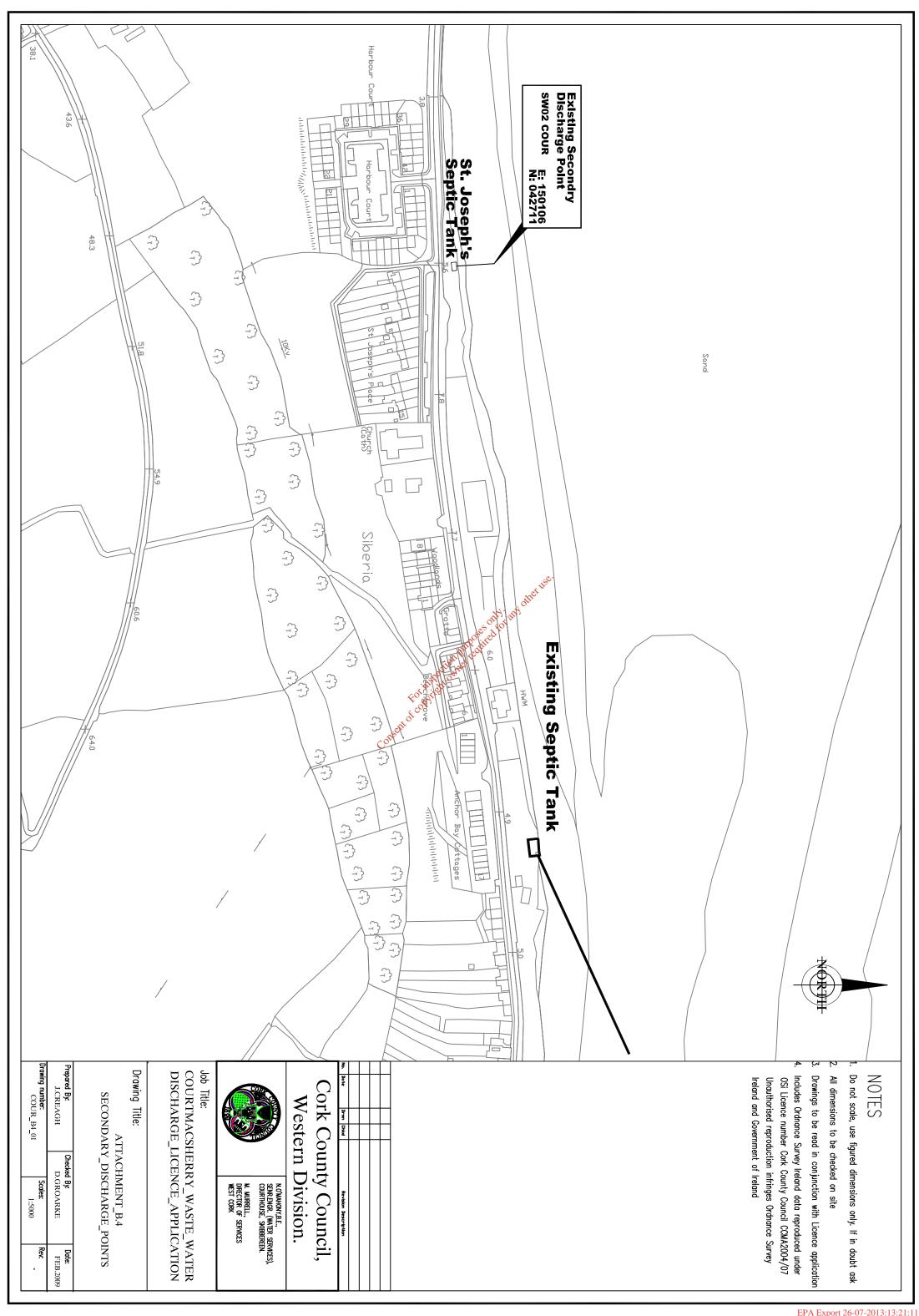
# ATTACHMENT No B.3 PRIMARY DISCHARGE LOCATION

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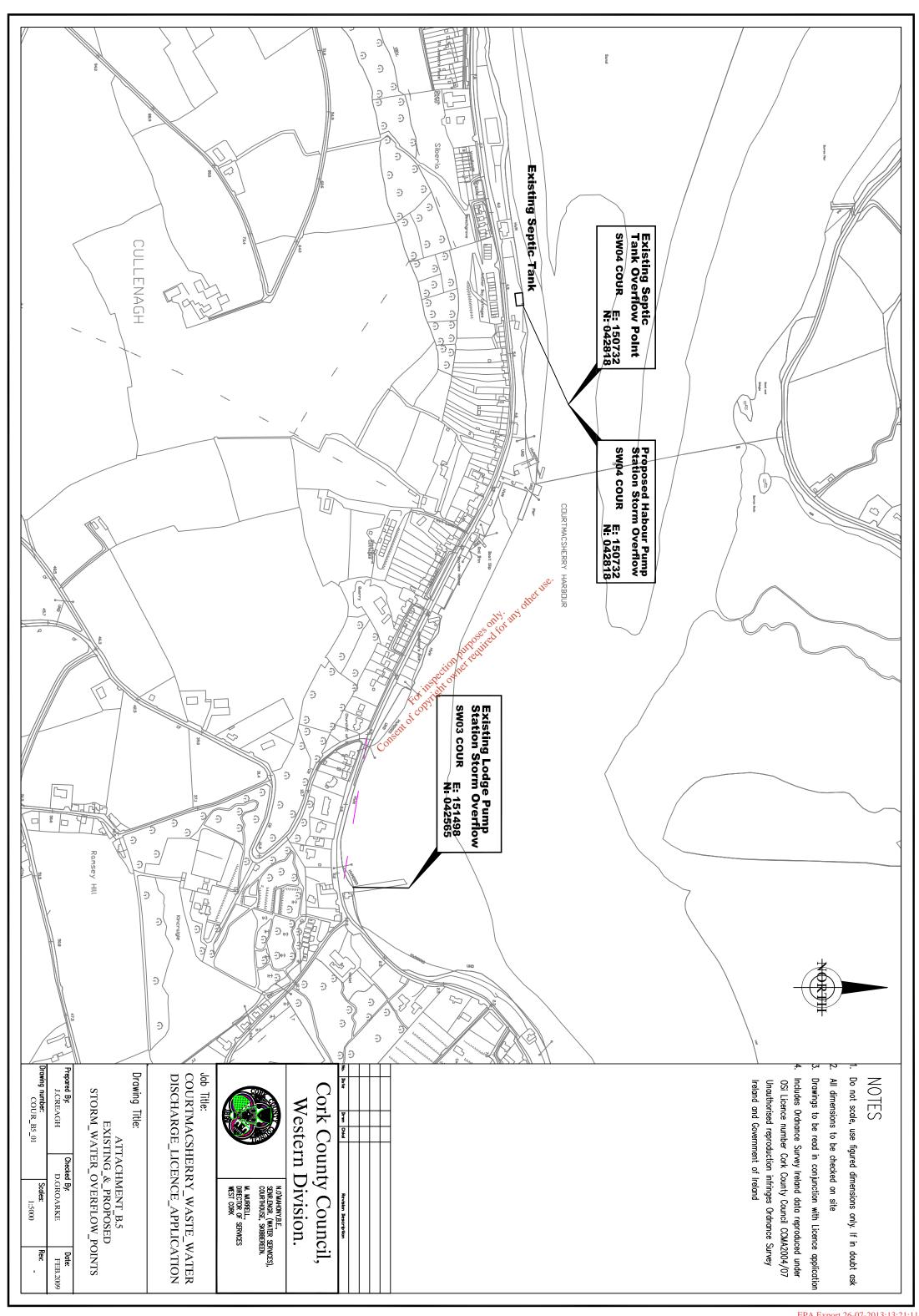
# ATTACHMENT No B.4 SECONDARY DISCHARGE LOCATION Fire the properties of the large o

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# ATTACHMENT No B.5 STORM WATER OVERFLOW LOCATIONS Exor inspection purpose to the control of the

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# **ATTACHMENT No B.8**

### **NOTICES AND ADVERTISEMENTS**

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# CORK COUNTY COUNCIL SITE NOTICE

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

In accordance with the Waste Water Discharge (Authorisation) Regulations 2007, S.I. No. 684 of 2007, Water Services (Western Division), Cork County Council, Courthouse, Skibbereen, Co. Cork is applying to the Environmental Protection Agency for a Waste Water Discharge Licence for Courtmacsherry Agglomeration at the following locations:

Plant Name	Location	National Grid Ref.
Courtmacsherry WWTP	Courtmacsherry	E150569 N042742

Discharge	Function	Townland	Receptor	Grid Reference
Primary	Main	Cullenagh	Courtmacsherry Estuary	E150732 N042818
Secondary	Minor	Cullenagh	Courtmacsherry Estuary	E150106 N042711

Cork County Council proposes to construct a new wastewater treatment plant at Cullenagh, Courtmacsherry, Co. Cork, Grid Reference (E149710, N042520). It is proposed to discharge treated wastewater from this plant to Courtmacsherry Estuary utilising existing outfall. The proposed outfall location is detailed in the table below:

Discharge Type	Function	Townland of the state of the st	Receptor	Grid Reference
Primary	Main	Cullenagh	<b>Courtmacsherry Estuary</b>	E150732 N042818

A copy of the application for the Waste Water Discharge Licence and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the Application shall as soon as is practicable after receipt by the Agency be available for inspection or purchase at the

- Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335599 Telephone: 053-9160600 Fax: 053-9160699 Email:info@epa.ie and at
- Cork County Council Water Services (Western Division), Courthouse, Skibbereen, Co. Cork; Telephone: 028-21299 Fax: 028-21995.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above.

# **COUNTY COUNCIL**

### MHAIRLE CHONTAE CHORCAÍ

#### LIC NOTICES

#### ERN DIVISION

rge	Function	Townland	Receptor	Grid Ref.
1. 4	Main	Killeagh	Dissour	E200709 N076496
red)	Main	Killeagh	Dissour	E200722 N076431

of the application for the Wastewater Discharge Licence, a further information relating to the application as may be d to the Agency in the course of the Agency's consideration pplication shall, as soon as is practicable after receipt by acy, be available for inspection or purchase at the:

onmental Protection Agency, PO Box 3000, Johnstown e Estate, Co. Wexford, Lo Call 1890 335599 )53-9160600 Fax: 053-9160699 Email:info@epa.ie

County Council Offices, Water Services South, ty Hall, Carrigrohane Road, Co. Cork, Tel: 021 - 4276891; 021 - 4276321.

sions in relation to the application may be made to ironmental Protection Agency at its headquarters ed above.

#### CATION TO THE ENVIRONMENTAL PROTECTION TY FOR A WASTEWATER DISCHARGE LICENCE

dance with the Wastewater Discharge (Authorisation) ons 2007, Water Services Southern Division of Cork Council, Carrigrohane Road, Cork is applying to the mental Protection Agency for a Wastewater Discharge for the Agglomeration of Killeens at the following s:

s WWTP I		Location Rathpeacon, Killeens	National Grid Ref. E164092 N075447		
urge	Function	Townland	Receptor	Grid Ref.	
У	Main	Monard	Blarney	E163793	

of the application for the Wastewater Discharge Licence, h further information relating to the application as may be d to the Agency in the course of the Agency's consideration pplication shall, as soon as is practicable after receipt by ncy, be available for inspection or purchase at the:

ronmental Protection Agency, PO Box 3000, Johnstown le Estate, Co. Wexford, Lo Call 1890 335 599 )53-9160600; Fax: 053-9160699; Email:info@epa.ie

County Council Offices, Water Services South, 1ty Hall, Carrigrohane Road, Co. Cork, Tel: 021-4276891; 021-4276321.

sions in relation to the application may be made to ironmental Protection Agency at its headquarters ed above.

#### RN DIVISION

#### CATION TO THE ENVIRONMENTAL PROTECTION Y FOR A WASTEWATER DISCHARGE LICENCE

dance with the Wastewater Discharge (Authorisation) ons 2007, Water Services Western Division, Cork County Courthouse, Skibbereen, Co. Cork is applying to the mental Protection Agency for a Wastewater Discharge for Castletownbere agglomeration at the following locations:

urge	Function	Townland	Receptor	Grid Ref.
y	Major	Foildarrig	Castletownbere	E68028
			Harbour	N46138
ary	Minor	Derrymihin	Castletownbere	E68344
		West	Harbour	N46342
ary	Minor	Derrymihin	Castletownbere	E68614
		West	Harbour	N46024
ary	Minor	Cametringane	Castletownbere	E67654
			Harbour	N45745
ary	Minor	Drom North	Groundwater	E67462
				N45370
ary	Minor	Foildarrig	Groundwater	E67997
				N46481

of the application for the Wastewater Discharge Licence,

#### **PUBLIC NOTICES**

#### WESTERN DIVISION

#### APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTEWATER DISCHARGE LICENCE

In accordance with the Wastewater Discharge (Authorisation)
Regulations 2007, Water Services Western Division, Cork County
Council, Courthouse, Skibbereen, Co. Cork is applying to the
Environmental Protection Agency for a Wastewater Discharge
Licence for Courtmasherry agglomeration at the following locations:

Plant Name	Location	National Grid Ref.
Courtmacsherry WWTP	Courtmacsherry	E150569
37 (1 ) (1 ) (1 ) (1 ) (1 ) (1 )		N042742

Discharge	Function	Townland	Receptor	Grid Ref.
		Cullenagh	Courtmacsherry	E150732 N042818
Secondary	Minor		Courtmacsherry Estuary	E150106 N042711

Cork County Council proposes to construct a new wastewater treatment plant at Cullenagh, Courtmacsberry, Co. Cork, Grid Reference (E149710, N042520). It is proposed to discharge treated wastewater from this plant to Courtmacsberry Estuary. The proposed location is detailed in the table below.

Discharge	Function	Townland	Receptor	Grid Ref.
Primary	Main	Cullenagh	Courtmacsherry	E150732
1		200	Estuary .	N042818

A copy of the application for the Wastewater Discharge Licence, and such further information relating to the application as may be furnished to the agency in the course of the Agency's consideration of the Application shall, as soon as is practicable after receipt by the Agency, be available for inspection or nurchase at the

 Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, Co. Wexford, Lo Call 1890 335 599; Tel: 053-9160600; Fax: 053-9160699; Email:info@epa.ie

#### and at

 Cork County Council Water Services, Courthouse, Skibbereen, Co., Cork, Tel: 028-21299; Fax: 028-21995.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters described above.

FORM OF NOTICE OF A COMPULSORY PURCHASE ORDER UNDER SECTION 76 OF AND THE THIRD SCHEDULE TO THE HOUSING ACT, 1966, AS EXTENDED BY SECTION 10 OF THE LOCAL GOVERNMENT (NO. 2) ACT, 1960, TO BE PUBLISHED IN ACCORDANCE WITH ARTICLE 4 (a) OF THE THIRD SCHEDULE TO THE HOUSING ACT, 1966, AS AMENDED BY THE PLANNING AND DEVELOPMENT ACT, 2000

#### COMPULSORY ACQUISITION OF LAND

Cork County Council Aherla Water Supply Scheme Compulsory Purchase Order 2009

The Cork County Council (hereinafter referred to as "the local authority"), in exercise of the powers conferred upon them by section 76 of the Housing Act, 1966, and the Third Schedule thereto, as extended by section 10 of the Local Government (No. 2) Act, 1960 as substituted by section 86 of the Housing Act, 1966 as amended by section 6 and the Second Schedule to the Roads Act, 1993 and as amended by the Planning and Development Act, 2000, have made an order entitled as above which is about to be submitted to An Bord Pleanála for confirmation. If confirmed, the order will authorise the local authority to acquire compulsorily the land described in the Schedule hereto for the purposes of the

#### **ROADS**

TEMPORARY CLOSURE OF PUBLIC ROAD -WHITEGATE AREA

PROPOSED CORK SCIENCE, INNOVATION AND

#### INVITATION TO MAKE INFORMAL SUBMISSIONS

Cork County Council are commencing public consultation in relation to the development of a Science, Innovation and Technology Park at Curraheen, on the western side of Cork City.

Following the public consultation exercise and consideration of submissions made, the Council will prepare a Draft Amendment to the Carrigaline Electoral Area Local Area Plan and a consequential Draft Variation to the Cork County Development Plan 2009, which will also be the subject of public consultation.

An Information Leaflet has been prepared which aims to promote public debate on how the proposed Science Park should develop and will be available from 23rd February, 2009. The publication of this leaflet is the first step in the process leading to the Amendment of the Carrigaline Electoral Area Local Area Plan and Consequential Variation to the County Development Plan. A public information day is also planned where staff will be available to discuss this proposal in further detail. This information day will be held from 4.00 p.m. to 8.00 p.m. on Tuesday, 3rd March 2009, in the Foyer, Floor 1, County Hall, Cork.

The information leaflet will be available during normal working hours at

- Planning Department, Floor 1, County Hall, Cork
- Planning Policy Unit, Floor 13, County Hall, Cork
- Council Offices in Ballincollig, Douglas, Carrigaline,
  Bandon and Blarney
- Public Libraries (Ballincollig, Wilton, Douglas, Carrigaline, Grand Parade, Bandon, Blarney and County Library, Model Business Park)

and to download or view on the County Council's web-site

#### Informal Submissions:

Informal submissions or observations can be made and these will be considered before the Proposed Amendment is prepared. Any person or organisation with an interest is hereby invited to send their comments in writing to:

The Senior Planner, Cork County Council, Planning Policy Unit, Floor 13, County Hall, Cork. Tel: 021 4285900

E-mail submissions can be sent to sciencepark@corkcoco.ie.

Submissions or observations made by email must include the full name and address of the person making the submission.

The final date on which submissions or observations in response to this invitation can be made is:

23rd March, 2009

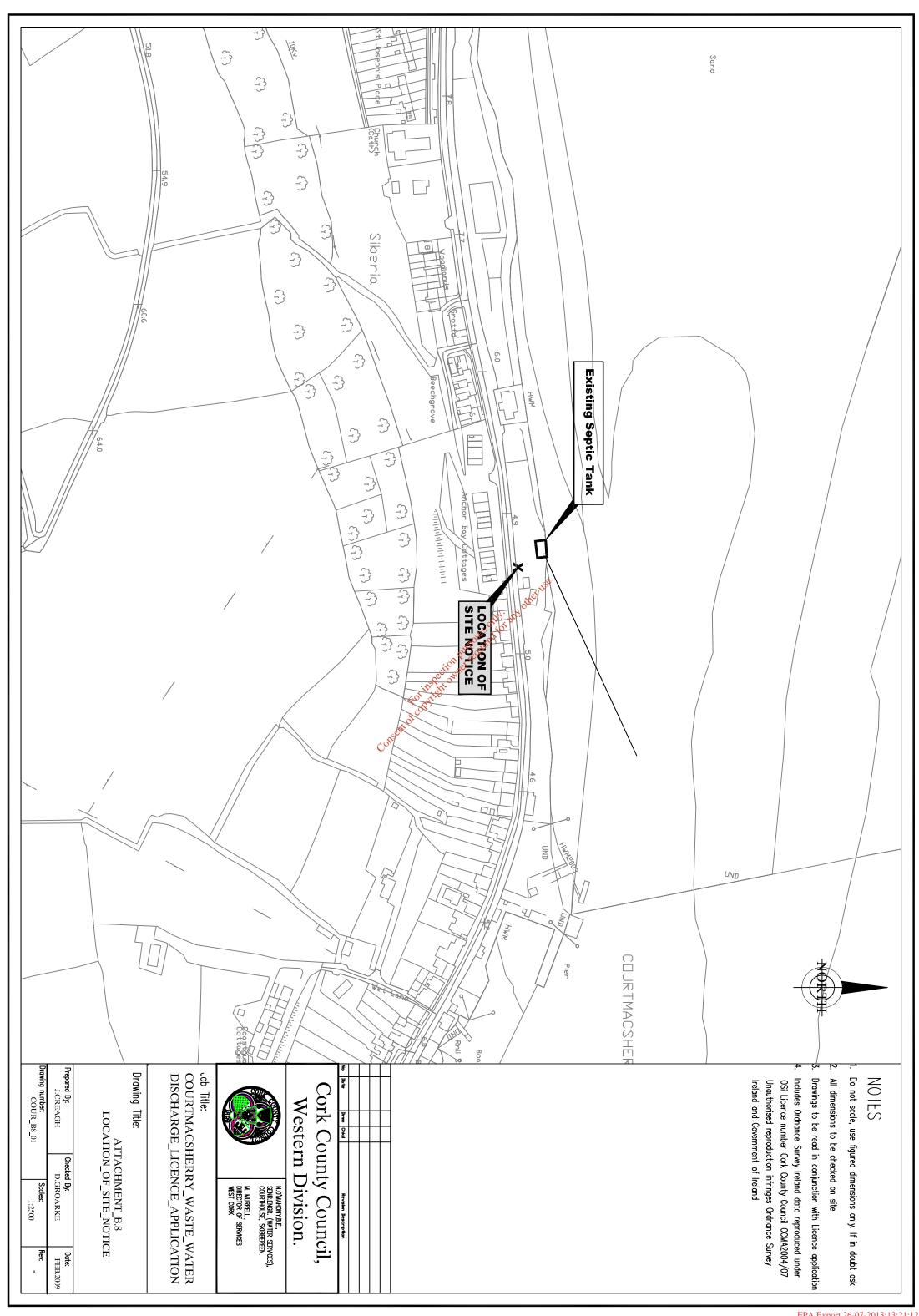
Dated: This 20th Day of February, 2009 Signed: Head of Forward Planning & Strategic Development

#### **TENDERS**

**Cork County Council** invites tenders for the provision of a Fuel Discount Card System to the Council.

Closing date for the receipt of tenders is Friday, 3rd April 2009 at 16.00hrs.

Rural Water, Planning & Coastal, Area Operations South



# ATTACHMENT No B.9(iii)

FEE

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# Comhairle Contae Chorcaí Cork County Council

Mr. Declan Groarke, Senior E xecutive Engineer, Cork County Council, Courthouse, Skibbereen. Courthouse,
Skibbereen, Co. Cork.
Tel (028) 21299 • Fax (028) 21995
Web: www.corkcoco.ie
Teach na Cúirte,
An Sciobairín, Co. Chorcaí.
Fón: (028) 21299 • Faics: (028) 21995
Suíomh Gréasáin: www.corkcoco.ie



Re:- Waste Water Discharge Regulations 2007.

Application to EPA for Licences – 3<sup>rd</sup> Round Fees:

Dear Declan,

With regard to the application to the EPA for a Discharge Licences for the agglomerations with P.E.s of 1001 to 2000 listed below. I confirm the following in relation to the application fee of  $\epsilon$ 60,000 (being  $\epsilon$ 15,000 for each agglomeration):

Transferred to EPA Bank Account:- Account No. 23507098

Date Transferred to EPA Bank Accounts 3th February 2009

Electronic Fund Transfer Reference No.:- 1070025.

Agglomerations : Baltimore

Castletownbere Courtmacsherry

Schull

This information should be included with the application to the EPA.

Yours faithfully,

Mary Notan, Staff Officer.

# **ATTACHMENT No B.10**

CAPITAL INVESTMENT PROGRAMME

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# **Cork County**

## Water Services Investment Programme 2007 - 2009

Schemes at Construction	W/S	Est. Cost		W/S	Est. Cost
Cork North			Cork South		
Mitchelstown Sewerage Scheme					00.040.000
(Nutrient Removal)	S	221,000	Ballincollig Sewerage Scheme (Upgrade) (G)	S	22,248,000
			Cork Lower Harbour Sewerage Scheme (excl. Crosshaven	-	73,542,000
Cork South			Shannagarry/ Garryvoe/ Ballycotton Sewerage Scheme	S	3,780,000
Ballyvourney/ Ballymakeery Sewerage Scheme	S	3,049,000	Youghal Sewerage Scheme	S	14,420,000
Cobh/ Midleton/ Carrigtwohill Water Supply Scheme	W	10,135,000			
Cork Lower Harbour Sewerage Scheme			Cork West		
(Crosshaven SS) (G)	S	4,850,000	Ballydehob Sewerage Scheme	S	683,000
Cork Water Strategy Study (G)	W	941,000	Bantry Water Supply Scheme	W	14,935,000
Kinsale Sewerage Scheme	S	20,000,000	Clonakilty Sewerage Scheme (Plant Capacity Increase)	S	3,677,000
Midleton Sewerage Scheme (Infiltration Reduction) (G	) 5	2,078,000	Courtmacsherry/ Timoleague Sewerage Scheme	S	2,472,000
Schemes to start 2007		41,274,000	Dunmanway Regional Water Supply Scheme Stage 1	W	12,669,000
Schemes to start 2007					164,629,000
Cork North			Serviced Land Initiative		
North Cork Grouped DBO Wastewater Treatment					
Plant (Buttevant, Doneraile & Kilbrin)	S	5,150,000	Cork North		
			Ballyclough Water Supply Scheme	W	139,000
Cork West					139,000
Skibbereen Sewerage Scheme	S	20,000,000	Ballyhooley Improvement Scheme	W/S	
		25,150,000	Brogshil Rethgoggin Sewerage Scheme  Weeng Water Supply Scheme  Ghurchtown Sewerage Scheme (incl. Water)	S	406,000
Schemes to start 2008		8	Ween'g Water Supply Scheme	W	115,000
		ion ?	(churchtown Sewerage Scheme (incl. Water)	W/S	543,000
Cork North		section with	Clondulane Sewage Treatment Plant	S	417,000
Mallow/ Ballyviniter Regional Water Supply Scheme (H	H) W	8,652,090	Freemount Sewerage Scheme	S	150,000
Mallow Sewerage Scheme (H)	S	¢05,488,000	Pike Road Sewerage Scheme (incl. Water)	W/S	2,080,000
Carl South		948,000 1,296,000 14,729,000	Rathcormac Sewerage Scheme (incl. Water)	W/S	555,000
Cork South  Ballincollig Sewerage Scheme (Nutrient Removal) (G)	1000	048 000	Spa Glen Sewerage Scheme	S	736,000
Ballingeary Sewerage Scheme	COLSO	1 296 000	Uplands Fermoy Sewerage Scheme (incl. Water)	W/S	1,174,000
Bandon Sewerage Scheme Stage 2	S	14,729,000	Watergrasshill Water Supply Scheme (incl. Sewerage) (G)	W/S	4,151,000
City Environs (CASP) Strategic Study (G)	S	153,000			
Cloghroe Sewerage Scheme (Upgrade)	S	683,000	Cork South		
Coachford Water Supply Scheme	W	1,318,000	Ballincollig Sewerage Scheme (Barry's Rd Foul and		
Garrettstown Sewerage Scheme	S	2,153,000	Storm Drainage) (G)	S	1,164,000
Inniscarra Water Treatment Plant Extension Phase 1	W	2,678,000	Belgooley, Water Supply Scheme (incl. Sewerage)	W/S	2,913,000
Little Island Sewerage Scheme (G)	S	2,200,000	Blarney Water Supply Scheme (Ext. to Station Rd) (G)	W	416,000
			Carrigtwohill Sewerage Scheme (Treatment and	**	410,000
2				S	7622000
Cork West			Storm Drain) (G)		7,632,000
Bantry Sewerage Scheme	S	7,148,000	Castlematyr Wastewater Treatment Plant Extension	S	1,200,000
Dunmanway Sewerage Scheme	S	2,153,000	Crookstown Sewerage Scheme (incl. Water)	W/S	1,200,000
Leap/ Baltimore Water Supply Scheme Schull Water Supply Scheme	W	6,365,000 5,253,000	Dripsey Water Supply Scheme (incl. Sewerage)	W/S	1,112,000
Schull Water Supply Scheme	VV	61,137,000	Glounthane Sewerage Scheme (G)	S	1,576,000
Schemes to start 2009		01,107,000	Innishannon Sewerage Scheme	S	277,000
			Innishannon Wastewater Treatment Plant	S	694,000
Cork North			Kerrypike Sewerage Scheme	S	832,000
Banteer/Dromahane Regional Water Supply Scheme	W	1,576,000	Kerrypike Water Supply Scheme	W	416,000
Conna Regional Water Supply Scheme Extension	W	2,627,000	Killeagh Wastewater Treatment Plant Extension	S	1,200,000
Cork NE Water Supply Scheme	W	4,326,000	Killeagh Water Supply Scheme (includes Sewerage)	W/S	485,000
Cork NW Regional Water Supply Scheme	W	6,046,000	Killeens Sewerage Scheme	S	420,000
Millstreet Wastewater Treatment Plant (Upgrade)	S	1,628,000	Kilnagleary Sewerage Scheme	S	694,000
			Midleton Wastewater Treatment Plant Extension	S	4,050,000
			The state of the s		1,000

# Cork County contd.

### Water Services Investment Programme 2007 - 2009

	W/S	Est. Cost		W/S	Est. Cost
Mogeely, Castlemartyr & Ladysbridge Water Supply Scheme	W	2,566,000	Cork South		
North Cobh Sewerage Scheme (G)	S	3,193,000	Carrigtwohill Sewerage Scheme (G)	S	20,000,000
Riverstick Water Supply Scheme (incl. Sewerage)	W/S	525,000	Cork Sludge Management (G)	S	14,420,000
Rochestown Water Supply Scheme	W	2,700,000	Cork Water Supply Scheme (Storage - Mount Emla,		
Saleen Sewerage Scheme	S	1,051,000	Ballincollig & Chetwind) (G)	W	8,500,000
Youghal Water Supply Scheme	W	2,300,000	Inniscarra Water Treatment Plant (Sludge Treatment)(	G)W	5,356,000
			Macroom Sewerage Scheme	S	5,150,000
Cork West			Minane Bridge Water Supply Scheme	W	1,421,000
Castletownshend Sewerage Scheme	S	1,576,000			
		50,797,000	Cork West		
Rural Towns & Villages Initiative			Bantry Regional Water Supply Scheme (Distribution)	W	9,455,000
			Cape Clear Water Supply Scheme	W	1,679,000
Cork North			Castletownbere Regional Water Supply Scheme	W	8,405,000
Buttevant Sewerage Scheme (Collection System)	S	2,446,000	Glengarriff Sewerage Scheme	S	2,500,000
Doneraile Sewerage Scheme (Collection System)	S	1,738,000	Roscarberry/Owenahincha Sewerage Scheme	S	1,576,000
			Skibbereen Regional Water Supply Scheme Stage 4	W	7,880,000
Cork South			other		95,646,000
Innishannon (Ballinadee/ Ballinspittle/ Garrettstown)			नीत्र, यात्री		
Water Supply Scheme	W	6,726,000	Skibbereen Regionat Water Supply Scheme Stage 4  Water Conservation Allocation  Water Conservation Allocation  Asset Management Study		12,206,000
Cork West		25	Asset Management Study		300,000
Ballylicky Sewerage Scheme	S	2,153,900	of the second second		
Baltimore Sewerage Scheme	S	3,982,000	South Western River Basin District (WFD) Project <sup>1</sup>		9,400,000
Castletownbere Sewerage Scheme	S	5.202,000			
Schull Sewerage Scheme		02 =00 000			
	2	24,950,000	Programme Total	48	5,489,000
Schemes to Advance through Planning	Consen				
Cork North					
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>&</sup>lt;sup>1</sup> This project is being led by Cork County Council on behalf of other authorities in the River Basin District

<sup>(</sup>H) Refers to a Hub as designated in the National Spatial Strategy

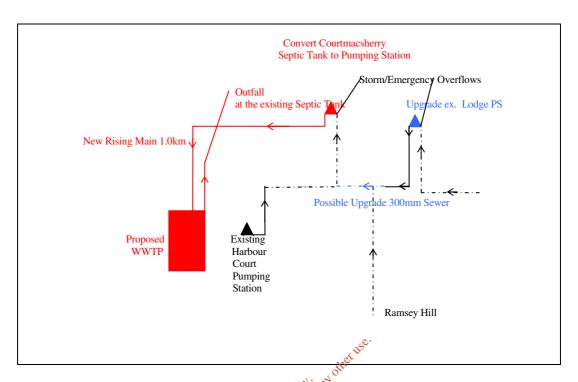
<sup>(</sup>G) Refers to a Gateway as designated in the National Spatial Strategy

## **ATTACHMENT No C.1**

OPERATIONAL INFORMATION REQUIREMENTS

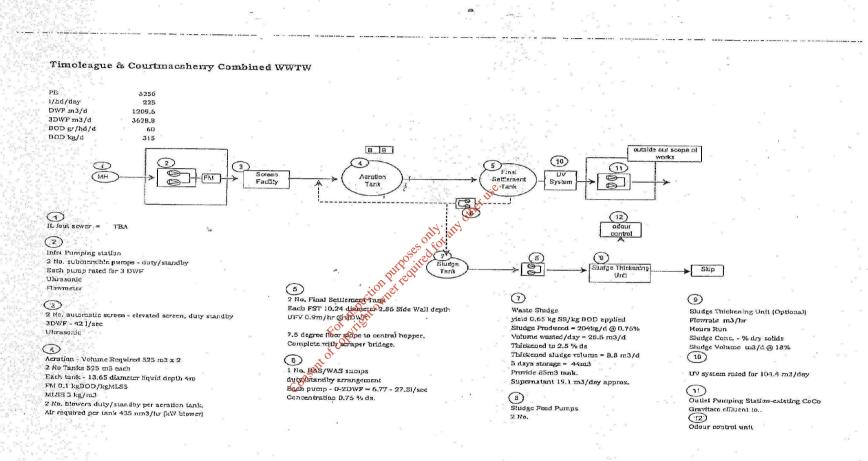
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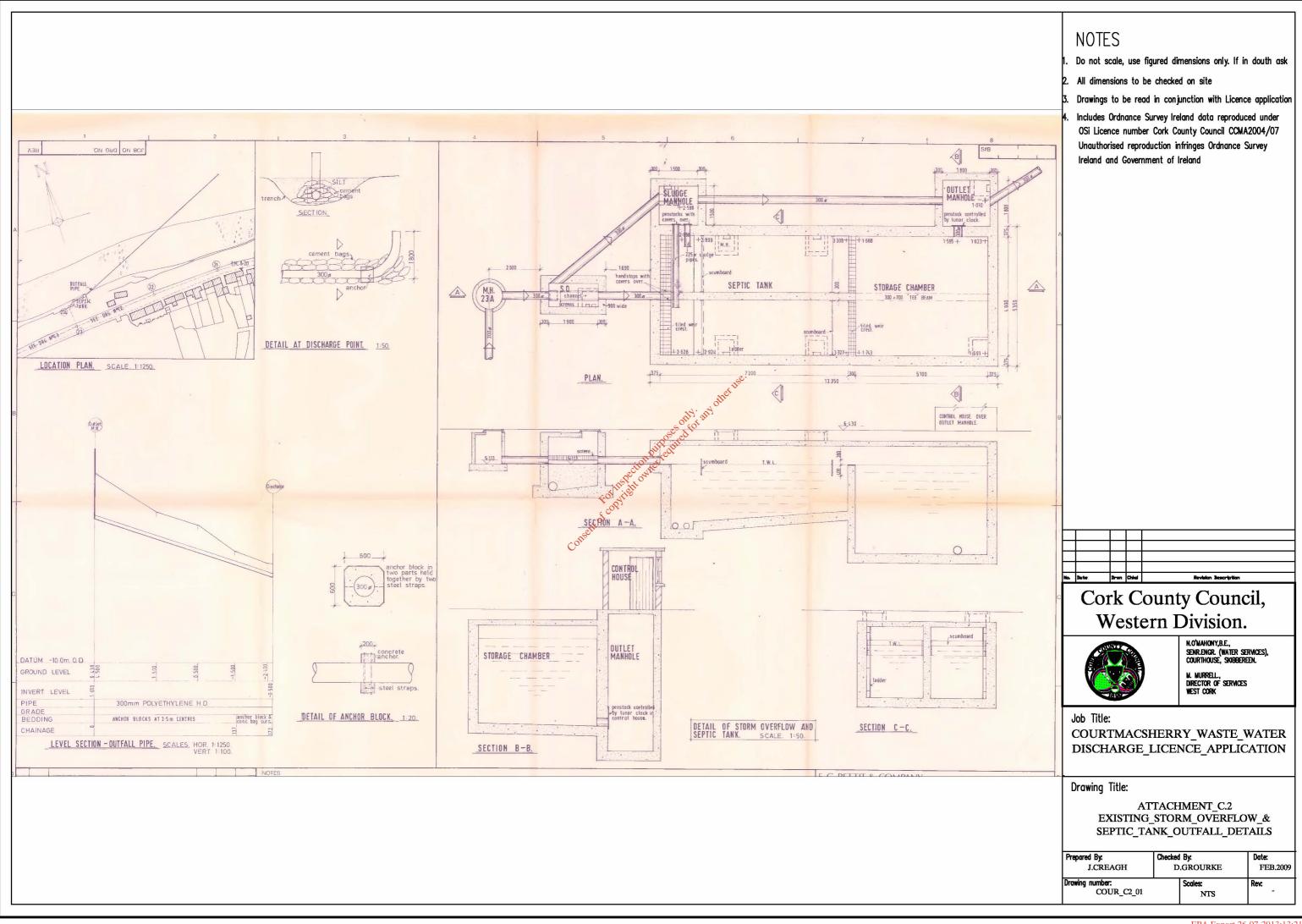
Schematic of Proposed Sewerage Scheme at Courtmacsherry

#### <u>Proposed Wastewater Treatment Plant – Indicative Layout</u> <u>Process Diagram</u>



# ATTACHMENT No C.2 OUTFALL DESIGN AND CONSTRUCTION For integration proper particular properties of the construction of the co

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# **ATTACHMENT No D.1**

**INFLUENT MONITORING** 

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**Attachment D.1 Courtmacsherry Influent** 

Sample Date	30/10/2008	Average	Kg/day	Kg/year
Sample	Influent			<u> </u>
Location	Lodge Pump Station			
Sample Code	GS1181			
Flow M <sup>3</sup> /Day	*			
pН	7.4	7.4	*	*
Temperature °C	*	*	*	*
Cond 20°C	1622	1622	*	*
SS mg/L	50	50	67.8	24747
NH <sub>3</sub> mg/L	6.9	6.9	9.356	3415.09
BOD mg/L	48.4	48.4	65.63	23955.096
COD mg/L	130	130	176.28	64342.2
TN mg/L	12	12	16.272	5939.28
Nitrite mg/L	1.451	1.451	1.96	718.16
Nitrate mg/L	3.03	3.03	4.109	1499.67
TP mg/L	3.2	3.2	4.339	1583.81
O-PO4-P mg/L	1.73	1.73	2.346	856.25
SO4 mg/L	78.2	78.2	106.04	38704.31
Phenols μg/L	40	40	0.054	19.798
Atrazine μg/L	<0.01	<0.04	<0.0000136	<0.00495
Dichloromethane μg/L	<5.0	€5.0	<0.00678	<2.475
Simazine μg/L	<0.01	all of 0.01	<0.0000136	<0.00495
Toluene μg/L	<0.1	<sup>1,60</sup> <0.1	<0.000136	<0.0495
Tributyltin μg/L	<0.02	<0.02	<0.0000271	<0.0099
Xylenes μg/L	<0.2 job of 1	< 0.2	<0.000271	<0.0099
Arsenic μg/L	1.2 per wife	1.2	0.027	9.899
Chromium mg/L	<0.02 th diff	<0.02	<0.027	<9.899
Copper mg/L	<0.025	<0.02	<0.027	<9.899
Cyanide μg/L		7	0.00949	3.465
Fluoride μg/L	220	220	0.298	108.9
Lead mg/L	<0.02	<0.02	<0.027	<9.899
Nickel mg/L	<0.02	<0.02	<0.027	<9.899
Zinc mg/L	<0.02	<0.02	<0.027	<9.899
Boron mg/L	0.13	0.13	0.176	64.34
Cadmium mg/L	<0.02	<0.02	<0.027	<9.899
Mercury μg/L	<0.02	<0.02	<0.027	<9.899
Selenium μg/L	2.3	2.3	0.00312	1.138
Barium mg/L	<0.02	<0.02	<0.027	<9.899

Maximum Volume for SW01 is 1356 m³/day Maximum Volume for SW02 is 40m³/day

ATTACHMENT No. E.2

MONITORING & SAMPLING POINTS

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# <u>Attachment E.2 - Courtmacsherry Waste Water Discharge Licence</u> <u>Application – Monitoring and Sampling Points</u>

Grab samples have been collected recently of the effluent from the primary discharge as well as receiving waters and the results are included in Attachments E.4 and F.1 of this application.

Upstream and downstream samples are not relevant in this case as the discharge is below low tide water level. Sampling of receiving waters was carried out at the opposite side of the estuary at Burren Rock.

There is no drinking water abstraction point downstream of the plant and therefore the Abstraction Directive is not applicable. Neither is there Shellfish Waters in the estuary.

The recent sample analysis has been carried out by the Laboratory of Cork County Council which is accredited for a number of analytical tests under the Irish National Accreditation Board (INAB) under the ISO 17025 international standard. It is currently accredited for the following parameters under that standard system:

- pH
- Biochemical Oxygen Demand
- Chemical Oxygen Demand
- Suspended Solids
- Ammonia
- Ortho Phosphate
- Total Phosphate
- Chloride
- Sulphate

It is proposed to sample the influent and effluent from septic tanks where accessible and receiving waters once a year in the future for the following parameters at the Cork County Council Laboratory in Skibbereen:

- pH
- Biochemical Oxygen Demand
- Chemical Oxygen Demand
- Suspended Solids
- Ammonia
- Ortho Phosphate
- Total Nitrogen

When the proposed WWTP for Courtmacsherry is constructed it will be operated under a Design, Build & Operate contract. A comprehensive

monitoring and sampling programme will be undertaken by the contractor in accordance with the relevant standards and frequencies as set out by Cork County Council.

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**Attachment E4 Courtmacsherry Discharge Outlet Table E4** 

Sample Date	30/10/2008	Average	Kg/day	Kg/year
Sample	Influent			
Location	Lodge Pump Station			
Sample Code	GS1181			
Flow M <sup>3</sup> /Day	*			
рН	7.4	7.4	*	*
Temperature °C	*	*	*	*
Cond 20°C	1622	1622	*	*
SS mg/L	50	50	67.8	24747
NH <sub>3</sub> mg/L	6.9	6.9	9.356	3415.09
BOD mg/L	48.4	48.4	65.63	23955.096
COD mg/L	130	130	176.28	64342.2
TN mg/L	12	12	16.272	5939.28
Nitrite mg/L	1.451	1.451	1.96	718.16
Nitrate mg/L	3.03	3.03	4.109	1499.67
TP mg/L	3.2	3.2	4.339	1583.81
O-PO4-P mg/L	1.73	1.73	2.346	856.25
SO4 mg/L	78.2	78.2	106.04	38704.31
Phenols μg/L	40	40	0.054	19.798
Atrazine μg/L	<0.01	<0.0	<0.0000136	<0.00495
Dichloromethane μg/L	<5.0	€5.0	<0.00678	<2.475
Simazine μg/L	<0.01	तार्थ वर्षार्थ 0.01	<0.0000136	<0.00495
Toluene μg/L	<0.1	<sup>₹0°</sup> <0.1	<0.000136	<0.0495
Tributyltin μg/L	<0.02	<0.02	<0.0000271	<0.0099
Xylenes μg/L	<0.2 jon trees	<0.2	<0.000271	<0.0099
Arsenic μg/L	<0.2 1.2 Referring	1.2	0.027	9.899
Chromium mg/L	<0.02 th diff	<0.02	<0.027	<9.899
Copper mg/L	<0.025	<0.02	<0.027	<9.899
Cyanide μg/L	A CONTRACTOR OF THE PROPERTY O	7	0.00949	3.465
Fluoride μg/L	220	220	0.298	108.9
Lead mg/L	<0.02	<0.02	<0.027	<9.899
Nickel mg/L	<0.02	<0.02	<0.027	<9.899
Zinc mg/L	<0.02	<0.02	<0.027	<9.899
Boron mg/L	0.13	0.13	0.176	64.34
Cadmium mg/L	<0.02	<0.02	<0.027	<9.899
Mercury μg/L	<0.02	<0.02	<0.027	<9.899
Selenium μg/L	2.3	2.3	0.00312	1.138
Barium mg/L	<0.02	<0.02	<0.027	<9.899

Maximum Volume for SW01 is 1356 m³/day Maximum Volume for SW02 is 40m³/day

**Attachment E4 Courtmacsherry Discharge Outlet Table E4** 30/10/2008 **Sample Date** Average Kg/day Kg/year Effluent Sample holding tank before discharge Location GS1180 **Sample Code** Flow M<sup>3</sup>/Day Hq 7.6 7.6 Temperature °C Cond 20°C 843 843 SS mg/L 36 36 48.816 17817.8 NH<sub>3</sub> mg/L 7.5 7.5 10.17 3712.1 **BOD** mg/L 14.08 19.092 6968.76 14.08 24252.1 COD mg/L 49 49 66.44 TN mg/L 6 6 8.136 2969.64 Nitrite mg/L 0.777 0.777 1.044 381.1 8.624 3147.82 Nitrate mg/L 6.36 6.36 TP mg/L 0.5 0.5 0.678 247.47 O-PO4-P mg/L 1.11 1.11 1.5052 549.38 19202.65 SO4 mg/L 38.8 38.8 52.61 Phenois µg/L <5 <5 < 0.00678 <2.475 Atrazine µg/L < 0.0000136 < 0.01 < 0.01 < 0.00495 Dichloromethane µg/L 0.00221 16.3 16.3 8.0675 < 0.0000136 < 0.00495 Simazine µg/L < 0.01 < 0.01 <0.1 Toluene µg/L < 0.1 < 0.000136 < 0.0495 Tributyltin µg/L < 0.0099 < 0.02 < 0.02 < 0.0000271 Xylenes ug/L < 0.2 < 0.2 < 0.000271 < 0.0099 Arsenic µg/L 0.00136 0.495 **Chromium mg/L** < 0.02 < 0.02 < 0.027 <9.899 Copper mg/L <0.02 < 0.027 <9.899 < 0.02 <5.0 on of real < 5.0 < 2.475 Cyanide µg/L < 0.00678 Fluoride µg/L 170 170 0.231 84.14 Lead mg/L < 0.02 < 0.02 < 0.027 <9.899 Nickel mg/L < 0.02 < 0.02 < 0.027 <9.899 Zinc mg/L < 0.02 < 0.02 < 0.027 <9.899 0.081 Boron mg/L 0.081 0.1098 40.09 <9.899 Cadmium mg/L < 0.02 < 0.02 < 0.027 Mercury µg/L < 0.02 < 0.02 < 0.027 <9.899 Selenium µg/L 2.8 2.8 0.003797 1.386 Barium mg/L < 0.02 < 0.02 < 0.027 <9.899

maximum volume for sw01 is 1356m3/day maximum volume for SW02 is 40m3/day

Attachment E4 Courtmacsherry Downstream Table E4				
Sample Date	30/10/2008	_		
Sample	River	Average		
Sample Code	GS1182			
Flow M <sup>3</sup> /Day	*			
рН	7.9	7.9		
Temperature °C	*	*		
Cond 20°C	41	41		
SS mg/L	162	162		
NH <sub>3</sub> mg/L	6.8	6.8		
BOD mg/L	<1.0	<1.0		
COD mg/L	61	61		
TN mg/L	<1.0	<1.0		
Nitrite mg/L	*	*		
Nitrate mg/L	*	*		
TP mg/L	<0.3	<0.3		
O-PO4-P mg/L	< 0.05	< 0.05		
SO4 mg/L	2285.4	2285.4		
Phenols μg/L	6	6		
Atrazine μg/L	<0.01	<0.01		
Dichloromethane μg/L	6.7	6.7		
Simazine μg/L	<0.01	<0.01		
Toluene μg/L	<0.1	<0.1		
Tributyltin μg/L	<0.02	<0.02		
Xylenes μg/L	<0.2	<0.2 gride		
Arsenic μg/L	<0.2	<0.2		
Chromium mg/L	<0.02	<sub>20</sub> <b>₹0</b> .02		
Copper mg/L	<0.02	pure dire < 0.02		
Cyanide μg/L	<5.0	ecitor <5.0		
Fluoride μg/L	0.64	0.64		
Lead mg/L	<0.02	<0.02		
Nickel mg/L	<0.02 <sub>soft of</sub>	<0.02		
Zinc mg/L	<0.02	<0.02		
Boron mg/L	2.964	2.964		
Cadmium mg/L	<0.2	<0.2		
Mercury μg/L	<0.02	<0.02		
Selenium μg/L	28.2	28.2		
Barium mg/L	<0.02	<0.02		