

ATTACHMENT NO. B5

Drawing No. B5-1 Location of Stormwater overflows

Drawing No. B5-2 Location of Stormwater overflows

Drawing No. B5-3 Location of Stormwater overflows

Drawing No. B5-4 Location of Stormwater overflows

*For inspection purposes only.
Consent of copyright owner required for any other use.*



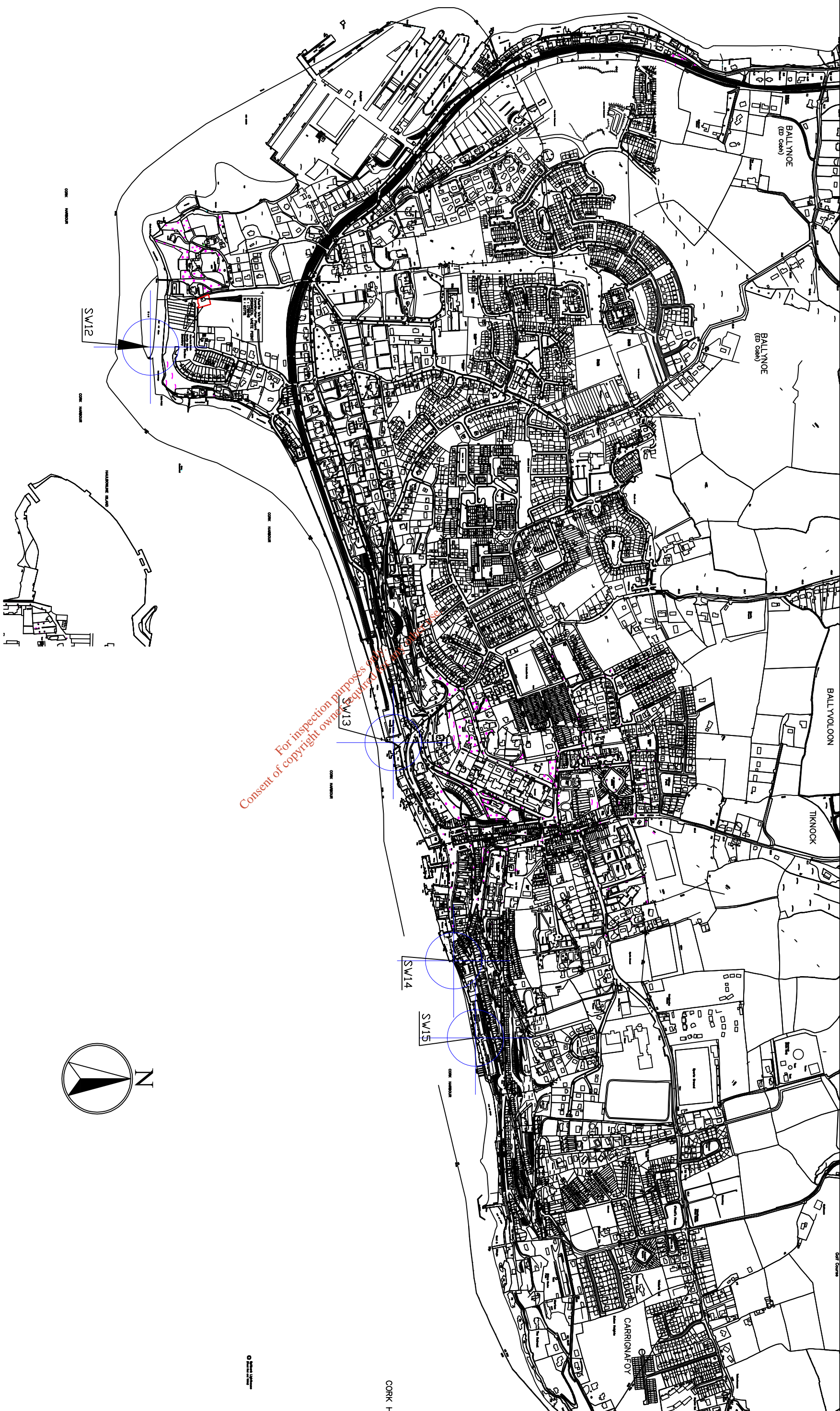
CORK COUNTY COUNCIL
 South Cork Division
 County Hall,
 Carrigrohane Rd.,
 Cork.

Tel. 021-4276991
 Fax 021-4276921

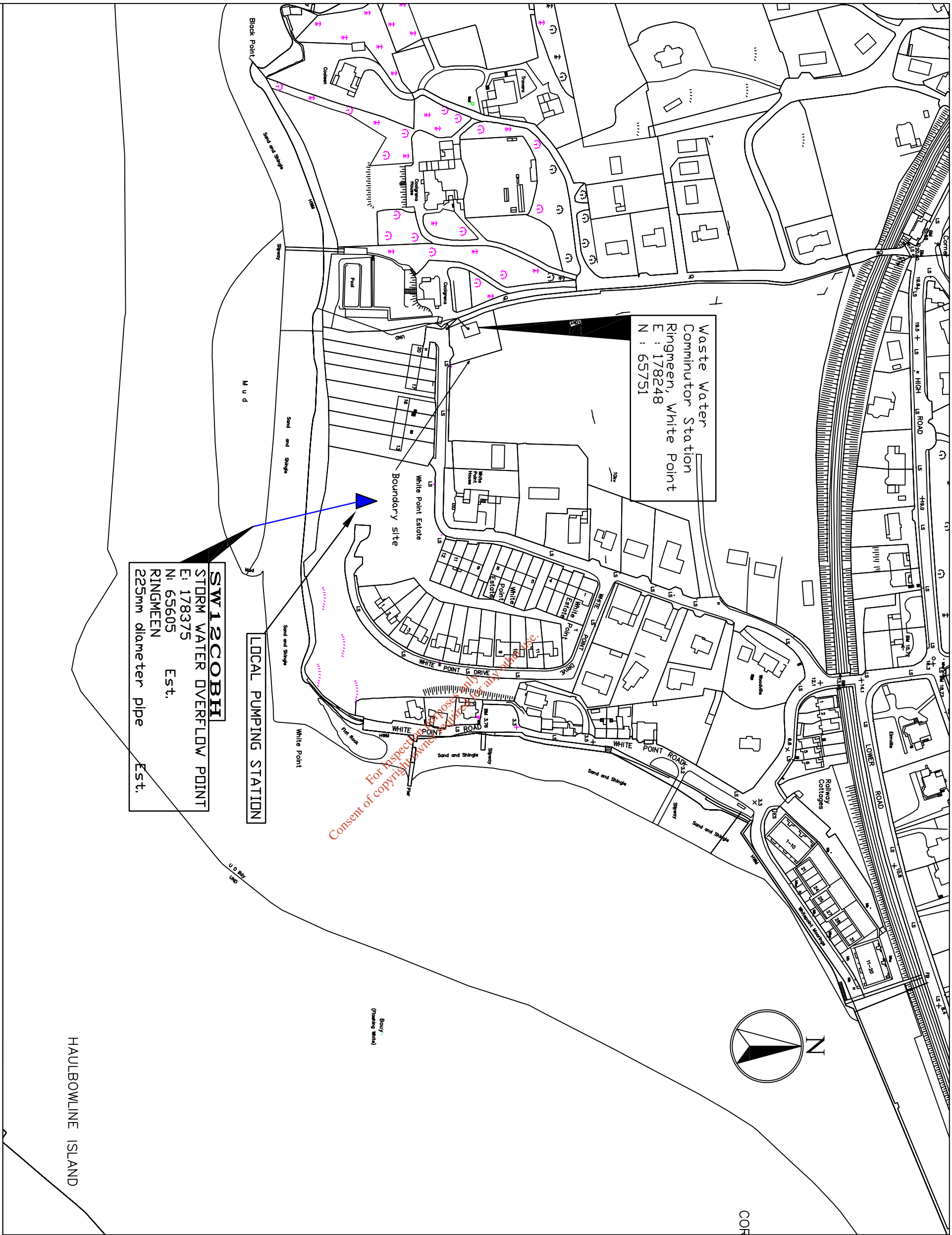
Rev	By	Date	Description

N.O'Keefe, B.Eng., C.Eng., Eur. Ing., F.I.E.I., M.I.C.E., Acting County Engineer County Hall, Cork
P. Power Director of Services South Cork.

Project: EPA LICENCE APPLICATION	Cobh WW
Title: Section B.5-Location of Storm Water Overflows	
Location: Cobh, Co. Cork	
Surveyed: T. McG	
Drawn: T. McG	
Approved: D.O'K	
Original Scale: 1: 10000	
Date: Dec. 2007	
Signed:	Drawing No:
	BS-1



NOTES:



CORK COUNTY COUNCIL
 South Cork Division
 County Hall,
 Carrigrohane Rd.,
 Cork.

Tel: 021-4276891
 Fax: 021-4276321

Rev	By	Date	Description

N.O'Keefe, B.Eng., C.Eng., Eur. Ing., F.I.E.L., M.I.C.E.,
 Acting County Engineer
 County Hall, Cork

P. Power
 Director of Services
 South Cork.

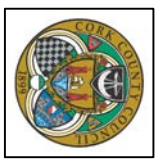
Project: EPA LICENCE APPLICATION Cobh WW

Title: Section B5.-Location of Storm Water Overflows.

Location: Ringmeen, Cobh

Surveyed: T. McG
 Drawn: T. McG Approv.: D.O'K.
 Signed: Original Seales: 1: 2500 Drawing No: BS-2

Date: Dec. 2007



CORK COUNTY COUNCIL
 South Cork Division
 County Hall,
 Carrigrohane Rd.,
 Cork.

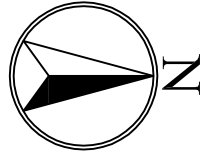
Tel. 021-4276891
 Fax 021-4276321

Rev	By	Date	Description

N.O'Keefe, B.Eng., C.Eng., Eurling, F.I.E.I., M.I.C.E., Acting County Engineer County Hall, Cork
P.Power Director of Services South Cork.

Project: EPA LICENCE APPLICATION	Cobh WW
Title: Section B5-Location of Storm Water Overflows.	
Location: Ringmeen, Cobh	
Surveyed: T. MCM	Approved: D.O'K
Drawn: T. MCM	Original Scales: 1:2500
Signed:	Date: Nov. 2007
	Drawing No: BS-3

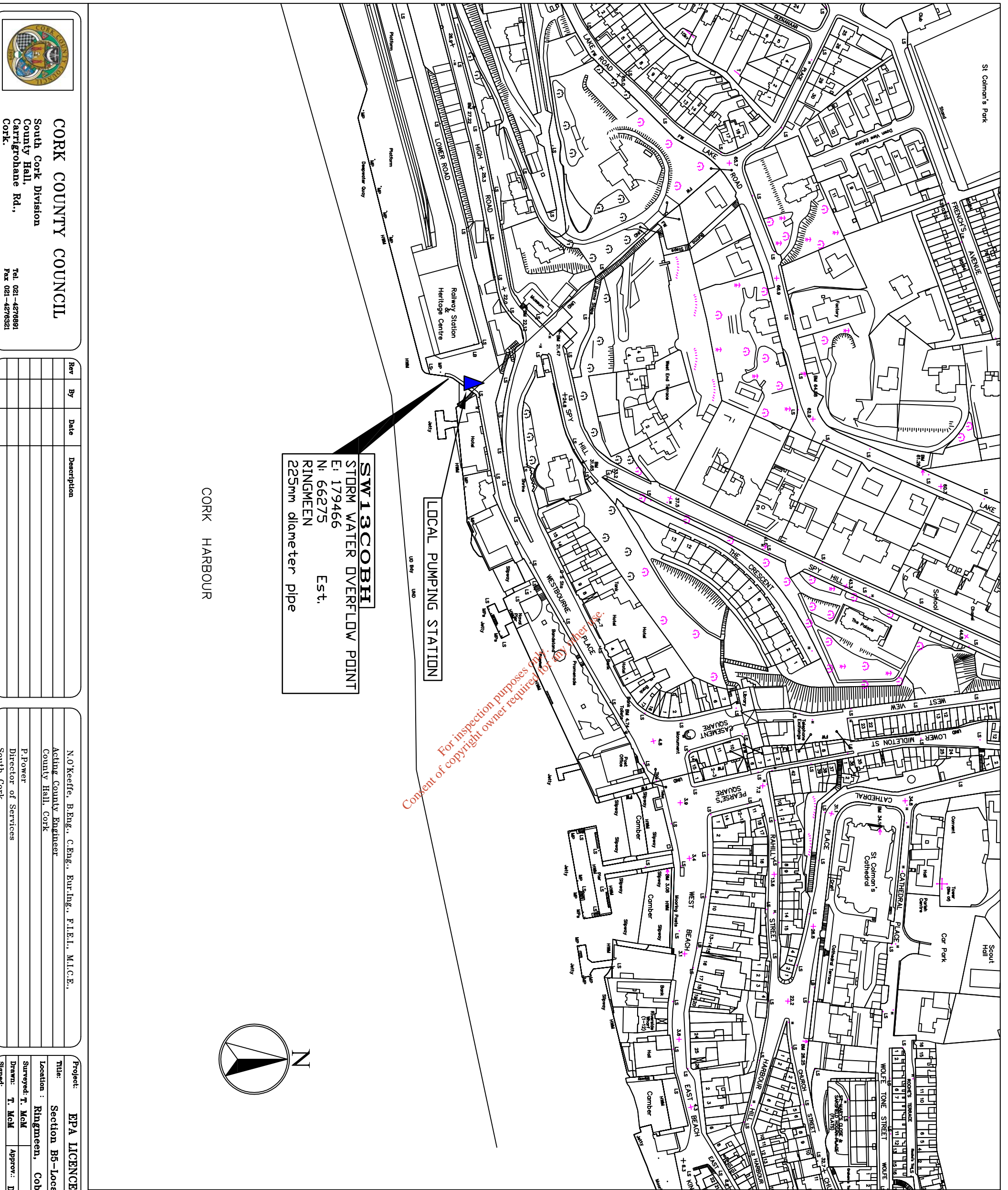
CORK HARBOUR



SW13COBH
 STORM WATER OVERFLOW POINT
 E: 179466
 N: 66275
 RINGMEEN
 225mm diameter pipe

LOCAL PUMPING STATION

For inspection purposes only
 Consent of copyright owner required for other use.



NOTES:

ATTACHMENT B6

**LETTER CONCERNING ENVIRONMENTAL IMPACT
STATEMENT**

*For inspection purposes only.
Consent of copyright owner required for any other use.*

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



Kevin Sugrue,
Senior Engineer,
Water Services


29th November 2007

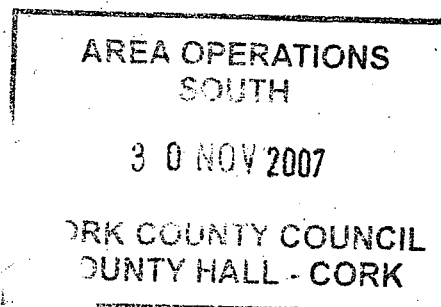
Ré: Lower Harbour SS

Environmental Impact Statement

The above scheme encompasses the agglomerations of Cobh, Passage West, Monkstown, Carrigaline, Ringaskiddy and Shanbally to be served by a single wastewater treatment plant near Ringaskiddy. The effluent from the proposed plant will discharge to the 'IDA' sewer which runs adjacent to the proposed site and which discharges to deep water in Cork Harbour near the Dognose Bank.

McDonald Pettit, Consulting Engineers, are preparing the EIS which is at an advanced stage and which the Council plans to submit to An Bord Pleanála before the end of 2007. Additional hardcopies (6No.) and electronic pdf copies (2 No.) will be made available to you as soon as possible after that, say first week in January 08.


Robert O'Farrell,
Senior Engineer



ATTACHMENT B8

SITE NOTICE

DRAWING B8-1 SITE NOTICE LOCATION

DRAWING B8-2 SITE NOTICE LOCATION

*For inspection purposes only.
Consent of copyright owner required for any other use.*



CORK COUNTY COUNCIL

SITE NOTICE

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTEWATER DISCHARGE LICENCE

In accordance with the Waste Water Discharge (Authorisation) Regulations 2007, S.I. No. 684 of 2007 Water Services Southern Division, Cork County Council, County Hall, Carrigrohane Road, Cork is applying to the Environmental Protection Agency for a Waste Water Discharge Licence for the agglomeration of Cobh Rural and Cobh Urban agglomeration at the following locations:

Discharge	Function	Receptor	Townland	Grid Reference
Primary	Major Outfall	Cork Harbour	Ringmeen	E 178243; N 65558
Secondary	Minor Outfall	Cork Harbour	Ringacoltig	E 177547; N 66546
Secondary	Minor Outfall	Cork Harbour	Ringmeen	E 178593; N 65910
Secondary	Minor Outfall	Cork Harbour	Ringmeen	E 178699; N 66007
Secondary	Minor Outfall	Cork Harbour	Ballyvoloon	E 179676; N 66313
Secondary	Minor Outfall	Cork Harbour	Kilgarvan	E 179807; N 66372
Secondary	Minor Outfall	Cork Harbour	Kilgarvan	E 180015; N 66415
Secondary	Minor Outfall	Cork Harbour	Carrignafof	E 180439; N 66515
Secondary	Minor Outfall	Cork Harbour	Carrignafof	E 180518; N 66526
Secondary	Minor Outfall	Cork Harbour	Carrignafof	E 180602; N 66520
Secondary	Minor Outfall	Cork Harbour	Carrignafof	E 180795; N 66547
Secondary	Emergency	Cork Harbour	Ringmeen	E 178375; N 65605
Secondary	Emergency	Cork Harbour	Ringmeen	E 179466; N 66275
Secondary	Emergency	Cork Harbour	Kilgarvan	E 180068; N 66442
Secondary	Emergency	Cork Harbour	Kilgarvan	E 180281; N 66502

It is intended to submit the Environmental Impact Statement associated with the proposed provision of a Waste Water Treatment Plant in the Lower Harbour to the Agency along with the Application.

A copy of the application for the Waste Water Discharge Licence, the Environmental Impact Statement 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

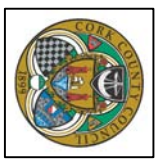
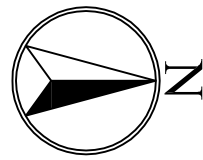
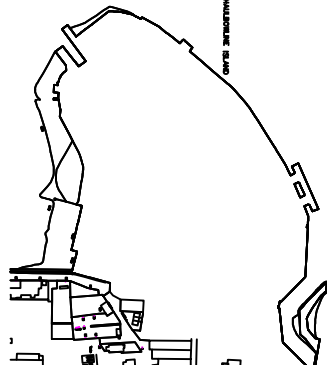
- Cork County Council Offices, Water Services South, Co Hall Carrigrohane Road, Co. Cork, Telephone: 021-4276891 Fax: 021-4276321.

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



NOT TO SCALE

Site Notice Location



CORK COUNTY COUNCIL
 South Cork Division
 County Hall,
 Carrigrohane Rd.,
 Cork.

Tel. 021-4278891
 Tel. 021-4278321

Rev	By	Date	Description

N.O'Keefe, B.Eng., C.Eng., Eur. Ing., F.I.E.I., M.I.C.E.,
 Acting County Engineer
 County Hall, Cork

P. Power
 Director of Services
 South Cork

Project: EPA LICENCE APPLICATION Cobh WW
Title: Section B8 - Site Notice Location.
Location: Ringmeen, White Point, Cobh

Surveyed: T. MCM
 Drawn: T. MCM
 Signed: D. O'K

Approved: D. O'K
 Original Scales: 1:10000
 Date: Dec. 2007

Drawing No:
B8-1

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 (Nutrient Removal)	S	221,000		Ballincollig Sewerage Scheme (Upgrade) (G)	S 22,248,000
Cork South				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		Cork West	
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
		41,274,000		Courtmacsherry/ Timoleague Sewerage Scheme	S 2,472,000
				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	
Cork West				Ballyclough Water Supply Scheme	W 139,000
Skibbereen Sewerage Scheme	S	20,000,000		Ballyhooley Improvement Scheme	W/S 139,000
		25,150,000		Broghill Rathgoggin Sewerage Scheme	S 406,000
Schemes to start 2008				Bweeng Water Supply Scheme	W 115,000
Cork North				Churchtown Sewerage Scheme (incl. Water)	W/S 543,000
Mallow/ Ballyvinter Regional Water Supply Scheme (H)	W	8,652,000		Clondulane Sewage Treatment Plant	S 417,000
Mallow Sewerage Scheme (H)	S	5,408,000		Freemount Sewerage Scheme	S 150,000
Cork South				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		Cork South	
Coachford Water Supply Scheme	W	1,318,000		Ballincollig Sewerage Scheme (Bary's Rd Foul and Storm Drainage) (G)	S 1,164,000
Garrettstown 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		Blamey 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
Cork West				Castlematr 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
		61,137,000		Innishannon Wastewater Treatment Plant	S 694,000
Schemes to start 2009				Kerrypike Sewerage Scheme	S 832,000
Cork North				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

	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, Ballincollig & Chetwind) (G)	W	8,500,000
Saleen Sewerage Scheme	S	1,051,000	Inniscarra Water Treatment Plant (Sludge Treatment) (G)W		5,356,000
Youghal Water Supply Scheme	W	2,300,000	Macroon Sewerage Scheme	S	5,150,000
Cork West			Minane Bridge Water Supply Scheme	W	1,421,000
Castletownshend Sewerage Scheme	S	1,576,000	Cork West		
		50,797,000	Bantry Regional Water Supply Scheme (Distribution)	W	9,455,000
Rural Towns & Villages Initiative			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
Cork South			Skibbereen Regional Water Supply Scheme Stage 4	W	7,880,000
Innishannon (Ballinadee/ Ballinspittle/ Garrettstown) Water Supply Scheme	W	6,726,000			95,646,000
Cork West			Water Conservation Allocation		12,206,000
Ballylicky Sewerage Scheme	S	2,153,000	Asset Management Study		300,000
Baltimore Sewerage Scheme	S	3,162,000	South Western River Basin District (WFD) Project¹		9,400,000
Castletownbere Sewerage Scheme	S	5,202,000			
Schull Sewerage Scheme	S	3,523,000			
		24,950,000	Programme Total		485,489,000
Schemes to Advance through Planning					
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			

¹ 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

Kevin Sugrue,
Senior Engineer,
Water Services

Re: Licensing of Discharges

Ballincollig- Donald Cronin is preparing a response in respect of Ballincollig

Blarney- The Council has recently completed an upgrade of the wastewater treatment plant at Blarney to 13,000 p.e. and has no immediate proposals to increase that capacity. The plant at Blarney has two independent secondary treatment processes with the wastewater load being split approximately evenly between them. One stream has biological nutrient removal and the other has chemical nutrient removal. There is concern in relation to the nutrient levels in the river catchments north of Cork City and the Council has obtained approval to carry out a drainage study, the City Environs (CASP) Drainage Study which is being funded under the Water Services Investment Programme 2007-2009. This study will consider the drainage options available for the catchment concerned having regard to existing and planned developments in the area. The Council is currently preparing a brief for the appointment of a consultant and expects to advertise the appointment in early January 2008 and to have the study completed in approx six months thereafter.

Crosshaven- wastewater from Crosshaven is collected and discharged to the Carrigaline network and ultimately discharges to Cork Harbour via the 'IDA' sewer at the Dognose Bank. The discharge is currently untreated but will ultimately be served by the Lower Harbour SS, the treatment plant for which will be located at Carrigaline East and the effluent from this plant will discharge through the 'IDA' outfall to the harbour. The EIS for the wastewater treatment plant is being prepared and the Council hopes to lodge it with ABP by end of 2007. Nutrient removal is not being proposed as the receiving waters are not designated sensitive. The PR for the Scheme will be lodged with the DEHLG shortly after the EIS is sent to ABP but approval to the PR will not issue until after the EIS is approved, say mid 2008. The Lower Harbour SS is being funded under the Water Services Investment Programme 2007-2009 and the scheme is expected to be fully operational before the end of 2012.

Cobh – this also forms part of the proposed Lower Harbour SS and a significant upgrading of the Cobh sewer network is envisaged with the wastewater being pumped across the harbour to the proposed WWTP at Carrigaline East. The current estimated design capacity required is 80,000 p.e.

Carrigaline- this wastewater is discharged (see Crosshaven) via the 'IDA' sewer and will ultimately form part of the Lower Harbour SS

Ringaskiddy – as for Carrigaline

Carrigtwohill –EIS under preparation and expected to be submitted to ABP March '08. The anticipated first phase will be to increase treatment capacity to 45000 p.e. from the current 8500 p.e. . The works are to be funded under the Serviced land Initiative. Nutrient removal will be included in the EIS and the PR as the Lee Estuary/Lough Mahon Area is currently designated a sensitive water.

The above information should be read in conjunction with earlier correspondence on the same matter and in particular you should cross-reference with response received from Duane O'Brien in relation to Carrigtwohill.

Regards,

R O'Farrell,
Senior Engineer,
WSIP Projects Office
4th December 2007

For inspection purposes only.
Consent of copyright owner required for any other use.

Kevin Sugrue

I have examined B.10 Capital Investment Programme and I have broken down the request to its constituent parts as shown below and have addressed them in the table to the best of my ability. You should attach a copy of the Assessment of Needs and the published WSIP.

Regards,

ROF

10th December 2007

B.10 Capital Investment Programme

Provide details of

1/ any proposed infrastructural development for the waste water works which has been prioritised in the water services authority 'Assessment of Needs' study.

2/ State whether this development work has been allocated funding under local or national **Water Services Investment Plans**.

If so, provide details

2a/ on the extent and type of work to be undertaken,

2b/ the likely timeframes for this work to be completed and

2c/ the level of funding being provided.

For inspection purposes only.
Consent of copyright owner required for any other use.

Table B10.

AGGLOMERATION	ASSESSMENT OF NEEDS	WATER SERVICES INVESTMENT PLANS.	EXTENT AND TYPE OF WORK	LIKELY TIMEFRAMES	LEVEL OF FUNDING
1	Blarney	No	Blarney (Blarney/Tower) has recently been upgraded to 13,000 p.e. secondary treatment and <u>includes nutrient removal</u> . No additional upgrading is proposed at this time.	N/A	N/A
2	Crosshaven	Yes	Forms an element of the proposed Lower Harbour SS. Crosshaven collection systems connected to Carrigaline SS from where it is pumped onwards to the 'IDA' outfall discharging at the Dognose Bank.	Element is completed and commissioned.	€ 5m
3	Cobh	Yes	Forms part of the proposed Lower Harbour SS that includes major upgrading of the Cobh collection system and transfer of the wastewater across Cork Harbour to a proposed new 80,000 p.e. secondary WWTP to be constructed at Carrigaline East, Ringaskiddy and which will discharge to the 'IDA' outfall. Nutrient removal is not being proposed as discharge is not to a sensitive area.	EIS for WWTP to be submitted to An Bored Pleanala Jan '08. PR for Lower Harbour SS expected to be approved Sept. 08, Construction to commence March 2010, completion March 2012	Estimated 80% DEHLG grant and 20% local funding €76m
4	Carrigaline	Yes	Forms part of the proposed Lower Harbour SS. The effluent from Carrigaline, which now includes Crosshaven, discharges untreated via the 'IDA' outfall at the Dognose Bank. It will be served by the proposed new 80,000 p.e. secondary WWTP to be constructed at Carrigaline East, Ringaskiddy and which will discharge to the 'IDA' outfall.	As for Cobh	As for Cobh
5	Ringaskiddy	Yes	Forms part of the proposed Lower Harbour SS. Wastewater from Ringaskiddy will be pumped to the new WWTP at Carrigaline East Ringaskiddy.	As for Cobh	As for Cobh
6	Carrigwohill	Yes	First phase proposal is to increase capacity to 45,000 p.e. secondary treatment. Nutrient removal is being proposed in the EIS and PR as the discharge area is currently designated a sensitive area.	EIS to ABP March '08	€20m - To be funded as an SLI Scheme i.e. 40% DEHLG funding and 60% local funding

Attachment included
1 / Assessment of Needs
2 / Water Services Investment programme
2007-2009

Yes	No
Yes	
Yes	

SECTION C
INFRASTRUCTURE & OPERATION

*For inspection purposes only.
Consent of copyright owner required for any other use.*

SECTION C: INFRASTRUCTURE & OPERATION

Advice on completing this section is provided in the accompanying Guidance Note.

C.1 Operational Information Requirements (Not Applicable)

Provide a description of the plant, process and design capacity for the areas of the waste water works where discharges occur, to include a copy of such plans, drawings or maps, (site plans and location maps, process flow diagrams), and such other particulars, reports and supporting documentation as are necessary to describe all aspects of the area of the waste water works discharging to the aquatic environment. Maps and drawings must be no larger than A3 size.

Attachment C.1 should contain supporting documentation with regard to the plant and process capacity, systems, storm water overflows, emergency overflows, etc., including flow diagrams of each with any relevant additional information. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, D.2, E.3 and F.2.

Attachment included	Yes	No
		x

C.2 Outfall Design and Construction

Provide details on the primary discharge point & secondary discharge points and storm overflows to include reference, location, design criteria and construction detail.

Attachment C.2 should contain any supporting documentation on the design and construction of any and all discharge outfalls, including stormwater overflows, from the waste water works.

Attachment included	Yes	No
		x

Type of Discharge	Direct Discharge 750 mm. dia. pipe
Unique Point Code	SW01COBH
Location	Ringmeen Townland (Whitepoint) Cobh
Grid ref (6E, 6N)	E 178243; N 65558

Type of Discharge	Direct Discharge 150 mm. dia. pipe
Unique Point Code	SW02COBH
Location	Ringacoltig Townland Cobh
Grid ref (6E, 6N)	E 177547; N 66546

Type of Discharge	Direct Discharge 300 mm. dia. pipe.
Unique Point Code	SW03COBH
Location	Ringmeen Townland Cobh
Grid ref (6E, 6N)	E 178593; N 65910

Type of Discharge	Direct Discharge 300 mm. dia. pipe
Unique Point Code	SW04COBH
Location	Ringmeen Townland Cobh
Grid ref (6E, 6N)	E 178699; N 66007

Type of Discharge	Direct Discharge 300 mm. dia. pipe
Unique Point Code	SW05COBH
Location	Ballyvoloon Townland Cobh
Grid ref (6E, 6N)	E 179676; N 66313

Type of Discharge	Direct Discharge 600 mm. dia. pipe
Unique Point Code	SW06COBH
Location	Kilgarvan Townland Cobh
Grid ref (6E, 6N)	E 179807; N 66372

Type of Discharge	Direct Discharge 375 mm. dia. pipe
Unique Point Code	SW07COBH
Location	Kilgarvan Townland Cobh
Grid ref (6E, 6N)	E 180015; N 66415

Type of Discharge	Direct Discharge 225 mm. dia. pipe
Unique Point Code	SW08COBH
Location	Carrignafoy Townland Cobh
Grid ref (6E, 6N)	E 180439; N 66515

Type of Discharge	Direct Discharge 225 mm. dia. pipe (estimated)
Unique Point Code	SW09COBH
Location	Carrignafoy Townland Cobh
Grid ref (6E, 6N)	E 180518; N 66526

Type of Discharge	Direct Discharge 225 mm. dia. pipe (estimated)
Unique Point Code	SW10COBH
Location	Carrignafoy Townland
Grid ref (6E, 6N)	E 180602; N 66520

Type of Discharge	Direct Discharge 300 mm. dia. pipe
Unique Point Code	SW11COBH
Location	Carrignafoy Townland Cobh
Grid ref (6E, 6N)	E 180795; N 66547

Type of Discharge	Emergency overflow from local pumping station Direct Discharge 225 mm diameter pipe (estimated)
Unique Point Code	SW12COBH
Location	Ringmeen Townland
Grid ref (6E, 6N)	E 178375; N 65605

Type of Discharge	Emergency overflow from local pumping station Direct Discharge 225 mm diameter pipe (estimated)
Unique Point Code	SW13COBH
Location	Ringmeen Townland
Grid ref (6E, 6N)	E 179466; N 66275

Type of Discharge	Emergency overflow from local pumping station Direct Discharge 225 mm diameter pipe (estimated)
Unique Point Code	SW14COBH
Location	Kilgarvan Townland Cobh
Grid ref (6E, 6N)	E 180068; N 66442

Type of Discharge	Emergency overflow from local pumping station Direct Discharge 300 mm diameter pipe (estimated)
Unique Point Code	SW15COBH
Location	Kilgarvan Townland Cobh
Grid ref (6E, 6N)	E 180281; N 66502

Type of Discharge	Storm overflow from local pump station. Direct Discharge 225 mm diameter pipe (estimated)
Unique Point Code	SW12COBH
Location	Ringmeen Townland
Grid ref (6E, 6N)	E 178375; N 65605

Type of Discharge	Storm overflow from local pump station. Direct Discharge 225 mm diameter pipe (estimated)
Unique Point Code	SW13COBH
Location	Ringmeen Townland
Grid ref (6E, 6N)	E 179466; N 66275

Type of Discharge	Storm overflow from local pump station. Direct Discharge 225 mm diameter pipe (estimated)
Unique Point Code	SW14COBH
Location	Kilgarvan Townland Cobh
Grid ref (6E, 6N)	E 180068; N 66442

Type of Discharge	Storm overflow from local pump station. Direct Discharge 300mm diameter pipe (estimated)
Unique Point Code	SW15COBH
Location	Kilgarvan Townland Cobh
Grid ref (6E, 6N)	E 180281; N 66502

SECTION D

DISCHARGES TO THE AQUATIC ENVIRONMENT

Cobh Discharge licence application

*For inspection purposes only.
Consent of copyright owner required for any other use.*

SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT

Advice on completing this section is provided in the accompanying Guidance Note.

Give particulars of the source, location, nature, composition, quantity, level and rate of discharges arising from the agglomeration and, where relevant, the period or periods during which such emissions are made or are to be made.

The applicant should address in particular all discharge points where the substances outlined in Tables D.1(i), (b) & (c) and D.1(ii), (b) & (c) of Annex 1 are emitted.

Where it is considered that any of the substances listed in Annex X of the Water Framework Directive (2000/60/EC) or any of the Relevant Pollutants listed in Annex VIII of the Water Framework Directive (2000/60/EC) are being discharged from the waste water works or are seen to be present in the receiving water environment downstream of a discharge from the works (as a result of any monitoring programme) the applicant shall screen the discharge for the relevant substance.

D Discharges to Surface Waters

Details of all discharges of waste water from the agglomeration should be supplied. Tables D.1(i)(a), (b) & (c), should be completed for the primary discharge point from the agglomeration and Tables D.1(ii)(a), (b) & (c) of Annex 1 should be completed for **each** secondary discharge point, where relevant. Table D.1(iii)(a) should be completed for **each** storm water overflow. Individual Tables must be completed for each discharge point.

Supporting information should form **Attachment D.1**

Attachment included	Yes	No
	x	

D.2 Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

Table D.2:

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING
Point Code Provide label ID's	Point Type (e.g., Primary/ Secondary/ Storm Water Overflow)	Local Authority Name (e.g., Donegal County Council)	Receiving Water Body Type (e.g., River, Lake, Groundwater, Transitional, Coastal)	Receiving Water Body Name (e.g., River Suir)	Protected Area Type (e.g., SAC, candidate SAC, NHA, SPA etc.)	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference

An individual record (i.e. row) is required for each discharge point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, E.3 and F.2.

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

Discharge Point Code:SW01 Cobh

Source of Emission:	Domestic Effluent Major Outfall
Location:	Townland of Ringmeen
Grid Ref. (12 digit, 6E, 6N):	E178243 N65558
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	none
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
Not available –harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> min/hr <u>24</u> hr/day ____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(i)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission
(Primary Discharge Point)**

Discharge Point Code: SW01Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	7.8	
2	Temperature	Not available	
3	Electrical Conductivity(@20°C)	775	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	183	Not available
5	Ammonia (as N)	35.2	Not available
6	Biochemical Oxygen Demand	282	Not available
7	Chemical Oxygen Demand	648	Not available
8	Total Nitrogen (as N)	56	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)	7.1	Not available
11	Total Phosphorus (as P)	2.29	Not available
12	Orthophosphate (as P) ^{Note 1}	Not available	Not available
13	Sulphate (SO ₄)	70	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	21.5	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(i)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Primary Discharge Point - Characteristics of the emission
Discharge Point Code: SW01Cobh

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<0.01	Not available	Not available
5	Tributyltin	<0.02	Not available	Not available
6	Xylenes	<1	Not available	Not available
7	Arsenic	5	Not available	Not available
8	Chromium	<20	Not available	Not available
9	Copper	42	Not available	Not available
10	Cyanide	<5	Not available	Not available
11	Fluoride		Not available	Not available
12	Lead	<20	Not available	Not available
13	Nickel	<20	Not available	Not available
14	Zinc	90	Not available	Not available
15	Boron	72	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	<0.2	Not available	Not available
18	Selenium	<0.74	Not available	Not available
19	Barium	28	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

Discharge Point Code:SW02Cobh

Source of Emission:	Domestic Effluent Minor Outfall
Location:	Townland of Ringacoltig
Grid Ref. (12 digit, 6E, 6N):	E177547 N66546
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	None
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
No available -harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> min/hr <u>24</u> hr/day ____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW02Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	7.1	
2	Temperature	Not available	
3	Electrical Conductivity (@20°C)	5060	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	84	Not available
5	Ammonia (as N)	11.8	Not available
6	Biochemical Oxygen Demand	80	Not available
7	Chemical Oxygen Demand	438	Not available
8	Total Nitrogen (as N)	28	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)	1.6	Not available
11	Total Phosphorus (as P) ^{Note 1}	2.12	Not available
12	Orthophosphate (as P)	0.98	Not available
13	Sulphate (SO ₄)	Not available	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	<0.10	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS
Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)
Discharge Point Code: SW02Cobh

Number	Substance	As discharged		
		Max. daily average ($\mu\text{g/l}$)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<0.01	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	<1	Not available	Not available
7	Arsenic	10	Not available	Not available
8	Chromium	31	Not available	Not available
9	Copper	<20	Not available	Not available
10	Cyanide	<5	Not available	Not available
11	Fluoride	Not available	Not available	Not available
12	Lead	<20	Not available	Not available
13	Nickel	<20	Not available	Not available
14	Zinc	<20	Not available	Not available
15	Boron	<20	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	1.4	Not available	Not available
18	Selenium	6	Not available	Not available
19	Barium	36	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

Discharge Point Code:SW03Cobh

Source of Emission:	Domestic Effluent
Location:	Townland of Ringmeen
Grid Ref. (12 digit, 6E, 6N):	E178593 N65910
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	None
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
No available –harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> min/hr <u>24</u> hr/day _____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW03Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	9.1	
2	Temperature	Not available	
3	Electrical Conductivity (@25°C)	1688	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	614	Not available
5	Ammonia (as N)	13.1	Not available
6	Biochemical Oxygen Demand	446	Not available
7	Chemical Oxygen Demand	1355	Not available
8	Total Nitrogen (as N)	40	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)	12.8	Not available
11	Total Phosphorus (as P) ^{Note 1}	6.1	Not available
12	Orthophosphate (as P)	6.85	Not available
13	Sulphate (SO ₄)	231	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	29.1	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: SW03Cobh

Number	Substance	As discharged		
		Max. daily average ($\mu\text{g/l}$)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<0.01	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	<1	Not available	Not available
7	Arsenic	3	Not available	Not available
8	Chromium	<20	Not available	Not available
9	Copper	46	Not available	Not available
10	Cyanide	<5	Not available	Not available
11	Fluoride		Not available	Not available
12	Lead	<20	Not available	Not available
13	Nickel	<20	Not available	Not available
14	Zinc	146	Not available	Not available
15	Boron	178	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	<0.2	Not available	Not available
18	Selenium	5	Not available	Not available
19	Barium	51	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

Discharge Point Code:SW04Cobh

Source of Emission:	Domestic Effluent		
Location:	Townland of Ringmeen		
Grid Ref. (12 digit, 6E, 6N):	E178699 N66007		
Name of receiving waters:	Cork Harbour		
River Basin District:	South Western River Basin District		
Designation of receiving waters:	None		
Flow rate in receiving waters:	Not available m ³ .sec ⁻¹ Dry Weather Flow		
No available –harbour area	Not available m ³ .sec ⁻¹ 95%ile flow		

Emission Details:

(i) Volume emitted <u>Not available</u>			
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	Continuous _____ min/hr <u>24</u> hr/day _____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW04Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	8.1	
2	Temperature	Not available	
3	Electrical Conductivity (@20°C)	802	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	614	Not available
5	Ammonia (as N)	41.5	Not available
6	Biochemical Oxygen Demand	185	Not available
7	Chemical Oxygen Demand	674	Not available
8	Total Nitrogen (as N)	64	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)	5.3	Not available
11	Total Phosphorus (as P) ^{Note 1}	9.55	Not available
12	Orthophosphate (as P)	5.35	Not available
13	Sulphate (SO ₄)	74	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	<0.10	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)
Discharge Point Code: SW04Cobh

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<0.01	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	<0.01	Not available	Not available
7	Arsenic	8	Not available	Not available
8	Chromium	<20	Not available	Not available
9	Copper	112	Not available	Not available
10	Cyanide	<5	Not available	Not available
11	Fluoride		Not available	Not available
12	Lead	96	Not available	Not available
13	Nickel	<20	Not available	Not available
14	Zinc	318	Not available	Not available
15	Boron	<20	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	<0.2	Not available	Not available
18	Selenium	<0.74	Not available	Not available
19	Barium	118	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

Discharge Point Code:SW05Cobh

Source of Emission:	Domestic effluent
Location:	Townland of Ballyvoloon
Grid Ref. (12 digit, 6E, 6N):	E179676 N66313
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	None
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
No available –harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> min/hr <u>24</u> hr/day ____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW05Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	7.4	
2	Temperature	Not available	
3	Electrical Conductivity (@20°C)	674	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	284	Not available
5	Ammonia (as N)	28.9	Not available
6	Biochemical Oxygen Demand	333	Not available
7	Chemical Oxygen Demand	782	Not available
8	Total Nitrogen (as N)	40	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)		Not available
11	Total Phosphorus (as P) ^{Note 1}	4.08	Not available
12	Orthophosphate (as P)	3.39	Not available
13	Sulphate (SO ₄)	53	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	<0.1	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: SW05Cobh

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<1	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	<1	Not available	Not available
7	Arsenic	2	Not available	Not available
8	Chromium	<20	Not available	Not available
9	Copper	51	Not available	Not available
10	Cyanide	<5	Not available	Not available
11	Fluoride	460	Not available	Not available
12	Lead	<20	Not available	Not available
13	Nickel	<20	Not available	Not available
14	Zinc	45	Not available	Not available
15	Boron	<20	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	<0.2	Not available	Not available
18	Selenium	2	Not available	Not available
19	Barium	25	Not available	Not available

TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)
Discharge Point Code:SW06Cobh

Source of Emission:	Domestic Effluent
Location:	Townland of Kilgarvan
Grid Ref. (12 digit, 6E, 6N):	E179807 N66372
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	None
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
No available -harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> min/hr <u>24</u> hr/day _____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW06Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	7.1	
2	Temperature	Not available	
3	Electrical Conductivity (@20°C)	610	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	202	Not available
5	Ammonia (as N)	21.1	Not available
6	Biochemical Oxygen Demand	329	Not available
7	Chemical Oxygen Demand	666	Not available
8	Total Nitrogen (as N)	83	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)		Not available
11	Total Phosphorus (as P) ^{Note 1}	3.75	Not available
12	Orthophosphate (as P)	3.0	Not available
13	Sulphate (SO ₄)	88	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	<0.1	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)
Discharge Point Code: SW06Cobh

Number	Substance	As discharged		
		Max. daily average ($\mu\text{g/l}$)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<1	Not available	Not available
5	Tributyltin	<0.02	Not available	Not available
6	Xylenes	<1	Not available	Not available
7	Arsenic	1	Not available	Not available
8	Chromium	<20	Not available	Not available
9	Copper	33	Not available	Not available
10	Cyanide	<5	Not available	Not available
11	Fluoride	470	Not available	Not available
12	Lead	<20	Not available	Not available
13	Nickel	<20	Not available	Not available
14	Zinc	80	Not available	Not available
15	Boron	<20	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	<0.2	Not available	Not available
18	Selenium	2	Not available	Not available
19	Barium	43	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

Discharge Point Code:SW07Cobh

Source of Emission:	Domestic Effluent		
Location:	Townland of Kilgarvan		
Grid Ref. (12 digit, 6E, 6N):	E180015 N66415		
Name of receiving waters:	Cork Harbour		
River Basin District:	South Western River Basin District		
Designation of receiving waters:	None		
Flow rate in receiving waters:	Not available m ³ .sec ⁻¹ Dry Weather Flow		
No available –harbour area	Not available m ³ .sec ⁻¹ 95%ile flow		

Emission Details:

(i) Volume emitted	Not available		
Normal/day	Not available m ³	Maximum/day	Not available m ³
Maximum rate/hour	Not available m ³	Period of emission (avg)	Continuous _____ min/hr <u>24</u> hr/day _____ day/yr
Dry Weather Flow	Not available m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW07Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	8.4	
2	Temperature	Not available	
3	Electrical Conductivity (@20°C)	754	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	579	Not available
5	Ammonia (as N)	42.6	Not available
6	Biochemical Oxygen Demand	271	Not available
7	Chemical Oxygen Demand	1074	Not available
8	Total Nitrogen (as N)	64	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)		Not available
11	Total Phosphorus (as P) ^{Note 1}	8.23	Not available
12	Orthophosphate (as P)	5.72	Not available
13	Sulphate (SO ₄)	73	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	<0.10	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)
Discharge Point Code: SW07Cobh

Number	Substance	As discharged		
		Max. daily average ($\mu\text{g/l}$)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<1	Not available	Not available
5	Tributyltin	<0.02	Not available	Not available
6	Xylenes	<1	Not available	Not available
7	Arsenic	1	Not available	Not available
8	Chromium	<20	Not available	Not available
9	Copper	150	Not available	Not available
10	Cyanide	<5	Not available	Not available
11	Fluoride	560	Not available	Not available
12	Lead	120	Not available	Not available
13	Nickel	<20	Not available	Not available
14	Zinc	446	Not available	Not available
15	Boron	42	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	<0.2	Not available	Not available
18	Selenium	3	Not available	Not available
19	Barium	135	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)
Discharge Point Code:SW08Cobh**

Source of Emission:	Domestic Effluent minor outfall
Location:	Townland of Carrignafoy
Grid Ref. (12 digit, 6E, 6N):	E180439 N66515
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	none
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
No available -harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> min/hr <u>24</u> hr/day ____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)

Discharge Point Code: SW08Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	7.4	
2	Temperature	Not available	
3	Electrical Conductivity (@20°C)	27600	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	366	Not available
5	Ammonia (as N)	8.2	Not available
6	Biochemical Oxygen Demand	134	Not available
7	Chemical Oxygen Demand	669	Not available
8	Total Nitrogen (as N)	434*	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)		Not available
11	Total Phosphorus (as P) ^{Note 1}	2.55	Not available
12	Orthophosphate (as P)	Not available	Not available
13	Sulphate (SO ₄)	1485	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	<0.10	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

*interference in method from salinity of sample

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS
Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)
Discharge Point Code: SW08Cobh

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<1	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	<1	Not available	Not available
7	Arsenic	36*	Not available	Not available
8	Chromium	79	Not available	Not available
9	Copper	<20	Not available	Not available
10	Cyanide	10*	Not available	Not available
11	Fluoride	620	Not available	Not available
12	Lead	32	Not available	Not available
13	Nickel	<20	Not available	Not available
14	Zinc	86	Not available	Not available
15	Boron	2998*	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	<0.2	Not available	Not available
18	Selenium	151*	Not available	Not available
19	Barium	35	Not available	Not available

*interference in method from salinity of sample

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)
Discharge Point Code:SW09Cobh**

Source of Emission:	Domestic Effluent minor outfall
Location:	Townland of Carrignafof
Grid Ref. (12 digit, 6E, 6N):	E180518 N66526
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	none
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
No available -harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	Continuous _____ min/hr _24_ hr/day _____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW09Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	7.1	
2	Temperature	Not available	
3	Electrical Conductivity (@20°C)	916	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	3066	Not available
5	Ammonia (as N)	61.3	Not available
6	Biochemical Oxygen Demand	1719	Not available
7	Chemical Oxygen Demand	4310	Not available
8	Total Nitrogen (as N)	131	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)		Not available
11	Total Phosphorus (as P) ^{Note 1}	70.25	Not available
12	Orthophosphate (as P)	13.04	Not available
13	Sulphate (SO ₄)	57	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	178	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: SW09Cobh

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<1	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	<1	Not available	Not available
7	Arsenic	3	Not available	Not available
8	Chromium	55	Not available	Not available
9	Copper	339	Not available	Not available
10	Cyanide	<5	Not available	Not available
11	Fluoride	310	Not available	Not available
12	Lead	311	Not available	Not available
13	Nickel	50	Not available	Not available
14	Zinc	940	Not available	Not available
15	Boron	40	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	<0.2	Not available	Not available
18	Selenium	1	Not available	Not available
19	Barium	458	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

Discharge Point Code:SW10Cobh

Source of Emission:	Domestic Effluent minor outfall
Location:	Townland of Carrignafoy
Grid Ref. (12 digit, 6E, 6N):	E180602 N66520
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	none
Flow rate in receiving waters: No available –harbour area	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow <u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> _____min/hr <u>24</u> hr/day _____day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW10Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	8.0	
2	Temperature	Not available	
3	Electrical Conductivity (@20°C)	44400	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	280	Not available
5	Ammonia (as N)	0.7	Not available
6	Biochemical Oxygen Demand	Not available#	Not available
7	Chemical Oxygen Demand	358	Not available
8	Total Nitrogen (as N)	Not available*	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)	Not available	Not available
11	Total Phosphorus (as P) ^{Note 1}	0.35	Not available
12	Orthophosphate (as P)	<0.05	Not available
13	Sulphate (SO ₄)	2488*	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	<0.10	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

*interference in method from salinity of sample

result outside range, not for reporting

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS
Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)
Discharge Point Code: SW10Cobh

Number	Substance	As discharged		
		Max. daily average ($\mu\text{g/l}$)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<1	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	<1	Not available	Not available
7	Arsenic	14*	Not available	Not available
8	Chromium	92*	Not available	Not available
9	Copper	<20	Not available	Not available
10	Cyanide	<5	Not available	Not available
11	Fluoride	730	Not available	Not available
12	Lead	34	Not available	Not available
13	Nickel	<20	Not available	Not available
14	Zinc	<20	Not available	Not available
15	Boron	4247*	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	<0.2	Not available	Not available
18	Selenium	55*	Not available	Not available
19	Barium	41	Not available	Not available

*interference in method from salinity of sample

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

Discharge Point Code:SW11Cobh

Source of Emission:	Domestic Effluent minor outfall
Location:	Townland of Carrignafoy
Grid Ref. (12 digit, 6E, 6N):	E180795 N66547
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	none
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
No available -harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> min/hr <u>24</u> hr/day _____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW11Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	7.7	
2	Temperature	Not available	
3	Electrical Conductivity (@20°C)	633	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	166	Not available
5	Ammonia (as N)	52	Not available
6	Biochemical Oxygen Demand	199	Not available
7	Chemical Oxygen Demand	500	Not available
8	Total Nitrogen (as N)	37	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)		Not available
11	Total Phosphorus (as P) ^{Note 1}	7.23	Not available
12	Orthophosphate (as P)	5.37	Not available
13	Sulphate (SO ₄)	68	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	<0.10	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: SW11Cobh

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine	<0.01	Not available	Not available
2	Dichloromethane	<1	Not available	Not available
3	Simazine	<0.01	Not available	Not available
4	Toluene	<1	Not available	Not available
5	Tributyltin	<0.02	Not available	Not available
6	Xylenes	<1	Not available	Not available
7	Arsenic	<0.96	Not available	Not available
8	Chromium	<20	Not available	Not available
9	Copper	<20	Not available	Not available
10	Cyanide	<5	Not available	Not available
11	Fluoride	530	Not available	Not available
12	Lead	<20	Not available	Not available
13	Nickel	<20	Not available	Not available
14	Zinc	62	Not available	Not available
15	Boron	75	Not available	Not available
16	Cadmium	<20	Not available	Not available
17	Mercury	<0.2	Not available	Not available
18	Selenium	1	Not available	Not available
19	Barium	31	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)
Discharge Point Code:SW12Cobh**

Source of Emission:	Domestic Effluent minor outfall		
Location:	Townland of Ringmeen		
Grid Ref. (12 digit, 6E, 6N):	E178375 N65605		
Name of receiving waters:	Cork Harbour		
River Basin District:	South Western River Basin District		
Designation of receiving waters:	none		
Flow rate in receiving waters:	Not available m ³ .sec ⁻¹ Dry Weather Flow		
No available -harbour area	Not available m ³ .sec ⁻¹ 95%ile flow		

Emission Details:

(i) Volume emitted	Not available		
Normal/day	Not available m ³	Maximum/day	Not available m ³
Maximum rate/hour	Not available m ³	Period of emission (avg)	Continuous _____min/hr 24 hr/day _____day/yr
Dry Weather Flow	Not available m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW12Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	Not available	
2	Temperature	Not available	
3	Electrical Conductivity (@25°C)	Not available	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	Not available	Not available
5	Ammonia (as N)	Not available	Not available
6	Biochemical Oxygen Demand	Not available	Not available
7	Chemical Oxygen Demand	Not available	Not available
8	Total Nitrogen (as N)	Not available	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)	Not available	Not available
11	Total Phosphorus (as P) ^{Note 1}	Not available	Not available
12	Orthophosphate (as P)	Not available	Not available
13	Sulphate (SO ₄)	Not available	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	Not available	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: SW12Cobh

Number	Substance	As discharged		
		Max. daily average ($\mu\text{g/l}$)	kg/day	kg/year
1	Atrazine	Not available	Not available	Not available
2	Dichloromethane	Not available	Not available	Not available
3	Simazine	Not available	Not available	Not available
4	Toluene	Not available	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	Not available	Not available	Not available
7	Arsenic	Not available	Not available	Not available
8	Chromium	Not available	Not available	Not available
9	Copper	Not available	Not available	Not available
10	Cyanide	Not available	Not available	Not available
11	Fluoride	Not available	Not available	Not available
12	Lead	Not available	Not available	Not available
13	Nickel	Not available	Not available	Not available
14	Zinc	Not available	Not available	Not available
15	Boron	Not available	Not available	Not available
16	Cadmium	Not available	Not available	Not available
17	Mercury	Not available	Not available	Not available
18	Selenium	Not available	Not available	Not available
19	Barium	Not available	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

Discharge Point Code:SW13Cobh

Source of Emission:	Emergency
Location:	Townland of Ringmeen
Grid Ref. (12 digit, 6E, 6N):	E179466 N66275
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	none
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
No available -harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> min/hr <u>24</u> hr/day _____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW13Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	Not available	
2	Temperature	Not available	
3	Electrical Conductivity (@25°C)	Not available	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	Not available	Not available
5	Ammonia (as N)	Not available	Not available
6	Biochemical Oxygen Demand	Not available	Not available
7	Chemical Oxygen Demand	Not available	Not available
8	Total Nitrogen (as N)	Not available	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)	Not available	Not available
11	Total Phosphorus (as P) ^{Note 1}	Not available	Not available
12	Orthophosphate (as P)	Not available	Not available
13	Sulphate (SO ₄)	Not available	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	Not available	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: SW13Cobh

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine	Not available	Not available	Not available
2	Dichloromethane	Not available	Not available	Not available
3	Simazine	Not available	Not available	Not available
4	Toluene	Not available	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	Not available	Not available	Not available
7	Arsenic	Not available	Not available	Not available
8	Chromium	Not available	Not available	Not available
9	Copper	Not available	Not available	Not available
10	Cyanide	Not available	Not available	Not available
11	Fluoride	Not available	Not available	Not available
12	Lead	Not available	Not available	Not available
13	Nickel	Not available	Not available	Not available
14	Zinc	Not available	Not available	Not available
15	Boron	Not available	Not available	Not available
16	Cadmium	Not available	Not available	Not available
17	Mercury	Not available	Not available	Not available
18	Selenium	Not available	Not available	Not available
19	Barium	Not available	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

Discharge Point Code:SW14Cobh

Source of Emission:	Emergency
Location:	Townland of Kilgarvan
Grid Ref. (12 digit, 6E, 6N):	E180068 N66442
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	none
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
No available -harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> min/hr <u>24</u> hr/day <u> </u> day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW14Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	Not available	
2	Temperature	Not available	
3	Electrical Conductivity (@25°C)	Not available	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	Not available	Not available
5	Ammonia (as N)	Not available	Not available
6	Biochemical Oxygen Demand	Not available	Not available
7	Chemical Oxygen Demand	Not available	Not available
8	Total Nitrogen (as N)	Not available	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)	Not available	Not available
11	Total Phosphorus (as P) ^{Note 1}	Not available	Not available
12	Orthophosphate (as P)	Not available	Not available
13	Sulphate (SO ₄)	Not available	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	Not available	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: SW14Cobh

Number	Substance	As discharged		
		Max. daily average ($\mu\text{g/l}$)	kg/day	kg/year
1	Atrazine	Not available	Not available	Not available
2	Dichloromethane	Not available	Not available	Not available
3	Simazine	Not available	Not available	Not available
4	Toluene	Not available	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	Not available	Not available	Not available
7	Arsenic	Not available	Not available	Not available
8	Chromium	Not available	Not available	Not available
9	Copper	Not available	Not available	Not available
10	Cyanide	Not available	Not available	Not available
11	Fluoride	Not available	Not available	Not available
12	Lead	Not available	Not available	Not available
13	Nickel	Not available	Not available	Not available
14	Zinc	Not available	Not available	Not available
15	Boron	Not available	Not available	Not available
16	Cadmium	Not available	Not available	Not available
17	Mercury	Not available	Not available	Not available
18	Selenium	Not available	Not available	Not available
19	Barium	Not available	Not available	Not available

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)**

Discharge Point Code:SW15Cobh

Source of Emission:	Emergency
Location:	Townland of Kilgarvan
Grid Ref. (12 digit, 6E, 6N):	E180281 N66502
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	none
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
No available -harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted	<u>Not available</u>		
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Continuous</u> min/hr <u>24</u> hr/day ____ day/yr
Dry Weather Flow	<u>Not available</u> m ³ /sec		

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)**

Discharge Point Code: SW15Cobh

Number	Substance	As discharged	
		Max. daily average	
1	pH	Not available	
2	Temperature	Not available	
3	Electrical Conductivity (@25°C)	Not available	
		Max. daily average (mg/l)	kg/day
4	Suspended Solids	Not available	Not available
5	Ammonia (as N)	Not available	Not available
6	Biochemical Oxygen Demand	Not available	Not available
7	Chemical Oxygen Demand	Not available	Not available
8	Total Nitrogen (as N)	Not available	Not available
9	Nitrite (as N)	Not available	Not available
10	Nitrate (as N)	Not available	Not available
11	Total Phosphorus (as P) ^{Note 1}	Not available	Not available
12	Orthophosphate (as P)	Not available	Not available
13	Sulphate (SO ₄)	Not available	Not available
14	Phenols (sum) ^{Note 2} (ug/l)	Not available	Not available

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: SW15Cobh

Number	Substance	As discharged		
		Max. daily average ($\mu\text{g/l}$)	kg/day	kg/year
1	Atrazine	Not available	Not available	Not available
2	Dichloromethane	Not available	Not available	Not available
3	Simazine	Not available	Not available	Not available
4	Toluene	Not available	Not available	Not available
5	Tributyltin	Not available	Not available	Not available
6	Xylenes	Not available	Not available	Not available
7	Arsenic	Not available	Not available	Not available
8	Chromium	Not available	Not available	Not available
9	Copper	Not available	Not available	Not available
10	Cyanide	Not available	Not available	Not available
11	Fluoride	Not available	Not available	Not available
12	Lead	Not available	Not available	Not available
13	Nickel	Not available	Not available	Not available
14	Zinc	Not available	Not available	Not available
15	Boron	Not available	Not available	Not available
16	Cadmium	Not available	Not available	Not available
17	Mercury	Not available	Not available	Not available
18	Selenium	Not available	Not available	Not available
19	Barium	Not available	Not available	Not available

TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)

**TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Storm Water Overflow) (1 table per discharge point)**

Discharge Point Code: SW12Cobh

Source of Emission:	Storm overflow
Location:	Townland of Ringmeen
Grid Ref. (12 digit, 6E, 6N):	E178375 N65605
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	NONE
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
Not available :Harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted <u>Not available</u>			
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Not available</u> min/hr _____ hr/day _____ day/yr

**TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Storm Water Overflow) (1 table per discharge point)**

Discharge Point Code: SW13 Cobh

Source of Emission:	Storm overflow		
Location:	Townland of Ringmeen		
Grid Ref. (12 digit, 6E, 6N):	E179466 N66275		
Name of receiving waters:	Cork Harbour		
River Basin District:	South Western River Basin District		
Designation of receiving waters:	NONE		
Flow rate in receiving waters:	Not available m ³ .sec ⁻¹ Dry Weather Flow		
Not available :Harbour area	Not available m ³ .sec ⁻¹ 95%ile flow		

Emission Details:

(i) Volume emitted <u>Not available</u>			
Normal/day	<u>Not available</u> m ³	Maximum/day	Not available m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Not available</u> min/hr _____ hr/day _____ day/yr

**TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Storm Water Overflow) (1 table per discharge point)**

Discharge Point Code: SW14 Cobh

Location:	Townland of Kilgarvan		
Grid Ref. (12 digit, 6E, 6N):	E180068 N66442		
Name of receiving waters:	Cork Harbour		
River Basin District:	South Western River Basin District		
Designation of receiving waters:	NONE		
Flow rate in receiving waters:	Not available m ³ .sec ⁻¹ Dry Weather Flow		
Not available :Harbour area	Not available m ³ .sec ⁻¹ 95%ile flow		

Emission Details:

(i) Volume emitted <u>Not available</u>			
Normal/day	<u>Not available</u> m ³	Maximum/day	Not available m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Not available</u> min/hr _____ hr/day _____ day/yr

**TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Storm Water Overflow) (1 table per discharge point)**

Discharge Point Code: SW15Cobh

Location:	Townland of Kilgarvan
Grid Ref. (12 digit, 6E, 6N):	E180281 N66502
Name of receiving waters:	Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	NONE
Flow rate in receiving waters:	<u>Not available</u> m ³ .sec ⁻¹ Dry Weather Flow
Not available :Harbour area	<u>Not available</u> m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(i) Volume emitted <u>Not available</u>			
Normal/day	<u>Not available</u> m ³	Maximum/day	<u>Not available</u> m ³
Maximum rate/hour	<u>Not available</u> m ³	Period of emission (avg)	<u>Not available</u> min/hr _____ hr/day _____ day/yr

Table D2 Tabular Data on Discharge Points

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING	VERIFIED
SW01Cobh	Primary	Cork County Council	Coastal	Cork Harbour	None	178243	65558	Yes
SW02Cobh	Secondary	Cork County Council	Coastal	Cork Harbour	None	177547	66546	Yes
SW03Cobh	Secondary	Cork County Council	Coastal	Cork Harbour	None	178593	65910	Yes
SW04Cobh	Secondary	Cork County Council	Coastal	Cork Harbour	None	178699	66007	Yes
SW05Cobh	Secondary	Cork County Council	Coastal	Cork Harbour	None	179676	66313	Yes
SW06Cobh	Secondary	Cork County Council	Coastal	Cork Harbour	None	179807	66372	Yes
SW07Cobh	Secondary	Cork County Council	Coastal	Cork Harbour	None	180015	66415	Yes
SW08Cobh	Secondary	Cork County Council	Coastal	Cork Harbour	None	180439	66515	Yes
SW09Cobh	Secondary	Cork County Council	Coastal	Cork Harbour	None	180518	66526	Yes
SW10Cobh	Secondary	Cork County Council	Coastal	Cork Harbour	None	180602	66520	Yes
SW11Cobh	Secondary	Cork County Council	Coastal	Cork Harbour	None	180795	66547	Yes
SW12Cobh	secondary/storm	Cork County Council	Coastal	Cork Harbour	None	178375	65605	Yes
SW13Cobh	secondary/storm	Cork County Council	Coastal	Cork Harbour	None	179466	66275	Yes
SW14Cobh	secondary/storm	Cork County Council	Coastal	Cork Harbour	None	180068	66442	Yes
SW14Cobh	secondary/storm	Cork County Council	Coastal	Cork Harbour	None	180281	66502	Yes

SECTION E

MONITORING

Cobh Wastewater Licence Application

*For inspection purposes only.
Consent of copyright owner required for any other use.*

SECTION E MONITORING

Advice on completing this section is provided in the accompanying Guidance Note.

E.1 Waste Water Discharge Frequency and Quantities – Existing & Proposed

Provide an estimation of the quantity of waste water likely to be emitted in relation to all primary and secondary discharge points applied for. This information should be included in Table E.1(i) of the Annex. The primary discharge shall be annotated with a **(P)**.

Provide an estimation of the quantity of waste water likely to be emitted in relation to all storm water overflows within the agglomeration applied for. This information should be included in Table E.1(ii) of the Annex.

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 ³ /annum)
SW01COBH (P)	365 days per annum	Not available
SW02COBH	365 days per annum	Not available
SW03COBH	365 days per annum	Not available
SW04COBH	365 days per annum	Not available
SW05COBH	365 days per annum	Not available
SW06COBH	365 days per annum	Not available
SW07COBH	365 days per annum	Not available
SW08COBH	365 days per annum	Not available
SW09COBH	365 days per annum	Not available
SW10COBH	365 days per annum	Not available
SW11COBH	365 days per annum	Not available
SW12COBH	Not available	Not available
SW13COBH	Not available	Not available
SW14COBH	Not available	Not available
SW15COBH	Not available	Not available

**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 ³ /annum)	Complies with Definition of Storm Water Overflow
SW12COBH	Not available	Not available	Not available
SW13COBH	Not available	Not available	Not available
SW14COBH	Not available	Not available	Not available
SW15COBH	Not available	Not available	Not available

E.2. Monitoring and Sampling Points

Programmes for environmental monitoring should be submitted as part of the application. These programmes should be provided as Attachment E.2.

Reference should be made to, provision of sampling points and safe means of access, sampling methods, analytical and quality control procedures, including equipment calibration, equipment maintenance and data recording/reporting procedures to be carried out in order to ensure accurate and reliable monitoring.

In determining the sampling programme to be carried out, the variability of the emission and its effect on the receiving environment should be considered.

Details of any accreditation or certification of analysis should be included.

Attachment E.2 should contain any supporting information.

Attachment included	Yes	No
	x	

E.3. Tabular data on Monitoring and Sampling Points

Applicants should submit the following information for each monitoring and sampling point:

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
Point Code Provide label ID's assigned in section E of application	Point Type (e.g., Primary, Secondary, Storm Water Overflow)	Monitoring Type M = Monitoring S = Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

An individual record (i.e., row) is required for each discharge point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and F.2.

TABLE E3

Tabular Data on Monitoring and Sampling Points

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
SW01Cobh	Primary	Sampling	178241	65651	Yes
SW02Cobh	Secondary	Sampling	177563	66552	Yes
SW03Cobh	Secondary	Sampling	178566	65931	Yes
SW04Cobh	Secondary	Sampling	178598	66032	Yes
SW05Cobh	Secondary	Sampling	179577	66334	Yes
SW06Cobh	Secondary	Sampling	179798	66440	Yes
SW07Cobh	Secondary	Sampling	180042	66441	Yes
SW08Cobh	Secondary	Sampling	180435	66536	Yes
SW09Cobh	Secondary	Sampling	180515	66565	Yes
SW10Cobh	Secondary	Sampling	180640	66614	Yes
SW11Cobh	Secondary	Sampling	180705	66586	Yes
SW12Cobh	secondary/storm	Not available	Not available	Not available	No
SW13Cobh	secondary/storm	Not available	Not available	Not available	no
SW14Cobh	secondary/storm	Not available	Not available	Not available	No
SW15Cobh	secondary/storm	Not available	Not available	Not available	No

E.4 Sampling Data

Regulation 16(1)(h) of the Waste Water Discharge (Authorisation) Regulations 2007 requires all applicants in the case of an existing waste water treatment plant to specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application.

Regulation 16(1)(l) of the regulations requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

Attachment E.4 should contain any supporting information.

Attachment included	Yes	No
		x

Cobh 2007

Sample Date	Sample	ID Code	pH	BOD mg/L	COD mg/L	SS mg/L	TP mg/L	TN mg/L	NH3 mg/L	SO4	O-PO4-P	Cond 20C	Chromium	Copper	Lead	Nickel	Zinc	Barium	Cadmium	Boron	Fluoride
24/10/2007	Cobh/AF/E180	SW03Cobh	9.1	446	1355	614	6.1	40	13.1	231	6.85	1688	<0.02	0.046	<0.02	<0.02	0.146	0.051	<0.02	0.178	-
24/10/2007	Cobh/DF/E185	SW04Cobh	8.1	185	674	614	9.55	64	41.5	74	5.35	802	<0.02	0.112	0.096	<0.02	0.318	0.118	<0.02	<0.02	-
24/10/2007	Cobh/AF/E2	SW02Cobh	7.1	80	438	84	2.12	28	11.8	-	0.98	5060	0.031	<0.02	<0.02	<0.02	<0.02	0.036	<0.02	<0.06	-
24/10/2007	Cobh/AF/E20	SW01Cobh	7.8	282	648	183	2.29	56	35.2	70	-	775	<0.02	0.042	<0.02	<0.02	0.09	0.028	<0.02	0.072	-
31/10/2007	Cobh/FF/E370	SW07Cobh	8.4	271	1074	579	8.23	64	42.6	73.4	5.72	754	<0.02	0.15	0.12	<0.02	0.446	0.135	<0.02	0.042	0.56
31/10/2007	Kennedy Park Manhole	SW05Cobh	7.4	333	782	284	4.08	40	28.9	52.7	3.39	674	<0.02	0.051	<0.02	<0.02	0.045	0.025	<0.02	<0.02	0.46
31/10/2007	Cobh/FF/E220	SW06Cobh	7.1	329	666	202	3.75	83	21.1	88	3	610	<0.02	0.033	<0.02	<0.02	0.08	0.043	<0.02	<0.02	0.47
31/10/2007	Cobh/FF/E500	SW11Cobh	7.7	199	500	166	7.23	37	52	67.9	5.37	633	<0.02	<0.02	<0.02	0.062	0.031	<0.02	<0.02	0.075	0.53
31/10/2007	Discharge from Connolly St.	SW09Cobh	7.1	1719	4310	3066	70.25	131	61.3	56.5	13.04	916	0.055	0.339	0.311	0.05	0.94	0.458	<0.02	0.04	0.31
31/10/2007	Cobh/GF/E240	SW08Cobh	7.4	134	669	366	2.55	434	8.2	1485.6	-	27600	0.079	<0.02	0.032	<0.02	0.086	0.035	<0.02	2.998	0.62
31/10/2007	Cobh/HE/E492	SW10Cobh	8	nfr	358	280	0.35	-	0.7	2488.3	<0.05	44400	0.092	<0.02	0.034	<0.02	<0.02	0.041	<0.02	4.247	0.73

Parameter	Method	Source/Results	DF E185	AF E2	AF E20	Connolly St	GF E440	Kennedy Pk	HF E492	FF E370	FF E220	HF E500	Units
Arsenic (OES)	ICP-OES	AF E180	8	10	5	3	36	2	14	1	1	<0.96	ug/L
Atrazine	HPLC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	ug/L
Cyanide	Colorimetry	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/L
Dichloromethane	GC-MS 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/L
EPH	GC-FID	21.2	7.1	9.9	<1	<1	<1	6.7	<1	<1	<1	<1	ug/l
Mercury (OES)	ICP-OES	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	ug/L
Phenols (Total)	GC-MS 2	29.10	<0.10	21.50	178	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	ug/L
Polyaromatic Hydrocarbons	HPLC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	ug/L
Selenium (OES)	ICP-OES	5	<0.74	<0.74	1	151	151	2	55	3	2	1	ug/L
Simazine	HPLC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	ug/L
Toluene	GC-MS 1	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	ug/L
Total Organic Carbon	TOC analyser (NPOC)	156.00	59.80	104.00	217.00	32.10	32.10	113.00	2.34	71.60	107.00	69.40	mg/L
TPH C10-C36	GC-FID	21.2	7.1	9.9	<1	<1	<1	6.7	<1	<1	<1	<1	ug/L
Tributyltin*	GC-MS 1	NS	NS	<0.02	NS	NS	NS	NS	NS	<0.02	<0.02	<0.02	ug/L as Sn
Xylene	GC-MS 1	<1	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/L

Section F

EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)

Cobh Wastewater Licence Application

For inspection purposes only.
Consent of copyright owner required for any other use.

SECTION F: EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)

Advice on completing this section is provided in the accompanying Guidance Note.

Detailed information is required to enable the Agency to assess the existing receiving environment. This section requires the provision of information on the ambient environmental conditions within the receiving water(s) upstream and downstream of any discharge(s).

Where development is proposed to be carried out, being development which is of a class for the time being specified under Article 24 (First Schedule) of the Environmental Impact Assessment Regulations, the information on the state of the existing environment should be addressed in the EIS. **In such cases, it will suffice for the purposes of this section to provide adequate cross-references to the relevant sections in the EIS.**

F.1. Assessment of Impact on Receiving Surface or Ground Water

- Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.
- Tables F.1(i)(a) & (b) should be completed for the primary discharge point. Surface water monitoring locations upstream and downstream of the discharge point shall be screened for those substances listed in Tables F.1(i)(a) & (b). Monitoring of surface water shall be carried out at not less than two points, one upstream from the discharge location and one downstream.
- For discharges from secondary discharge points Tables F.1(ii)(a) & (b) should be completed. Furthermore, provide summary details and an assessment of the impacts of any existing or proposed emissions on the surface water or ground (aquifers, soils, sub-soils and rock environment), including any impact on environmental media other than those into which the emissions are to be made.
- Provide details of the extent and type of ground emissions at the works. For larger discharges to groundwaters, e.g., from Integrated Constructed Wetlands, large scale percolation areas, etc., a comprehensive report must be completed which should include, inter alia, topography, meteorological data, water quality, geology, hydrology, and hydrogeology. The latter must in particular present the aquifer classification and vulnerability. The Geological Survey of Ireland Groundwater Protection Scheme Dept of the Environment and Local Government, Geological Survey of Ireland, EPA (1999) methodology should be used for any such classification. This report should also identify all surface water bodies and water wells that may be at risk as a result of the ground discharge.
- Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other legislative standards. Submit a copy of the most recent water quality management plan or catchment management plan in place for the receiving water body. Give details of any designation under any Council Directive or Regulations that apply in relation to the receiving water.
- Provide a statement as to whether or not emissions of main polluting substances (as defined in the *Dangerous Substances Regulations S.I. No. 12 of 2001*) to water are likely to impair the environment.

- In circumstances where water abstraction points exist downstream of any discharge describe measures to be undertaken to ensure that discharges from the waste water works will not have a significant effect on faecal coliform, salmonella and protozoan pathogen numbers, e.g., Cryptosporidium and Giardia, in the receiving water environment.
- Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on –
 - (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive) –
 - (i) notified for the purposes of Regulation 4 of the Natural Habitats Regulations, subject to any amendments made to it by virtue of Regulation 5 of those Regulations,
 - (ii) details of which have been transmitted to the Commission in accordance with Regulation 5(4) of the Natural Habitats Regulations, or
 - (iii) added by virtue of Regulation 6 of the Natural Habitats Regulations to the list transmitted to the Commission in accordance with Regulation 5(4) of those Regulations,
 - (b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC¹ in accordance with the procedures laid down in Article 21 of that Directive,
 - (c) a special area of conservation within the meaning of the Natural Habitats Regulations, or
 - (d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC²;

¹Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ No. L 206, 22.07.1992)

²Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (OJ No. L 103, 25.4.1979)

- Describe, where appropriate, measures for minimising pollution over long distances or in the territory of other states.
- This section should also contain full details of any modelling of discharges from the agglomeration. Full details of the assessment and any other relevant information on the receiving environment should be submitted as **Attachment F.1.**

Attachment included	Yes	No
	X	

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW01Cobh

MONITORING POINT CODE: SW01Cobh

Parameter	Results (mg/l ^{Note 1})				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	24/10/2007	No further sample dates					
pH	7.8	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	775	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	183	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	35.2	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	282	x	x	x	Grab	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	648	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
Total Nitrogen (as N)	56	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)		x	x	x	Grab	0.1 mg/L	Colorimetric
Total Phosphorus (as P)	2.29	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Orthophosphate (as P) - unfiltered	Not available	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	70	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)		x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.
 Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

X=not tested

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW01Cobh

MONITORING POINT CODE: SW01Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<0.01	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	<0.02	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	5	X	X	X	Grab	0.96 µg/L	ICP-MS
Chromium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	42	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	<5	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	x	X	X	X	Grab	<0.1mg/L	ISE
Lead	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	90	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	72	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	<0.2	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	<0.74	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	28	X	X	X	Grab	0.02 mg/L	ICP-OES

X=not tested

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW02Cobh

MONITORING POINT CODE: SW02Cobh

Parameter	Results (mg/l ^{Note 1})			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
pH	7.2	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	5060	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	84	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	11.8	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	80	x	x	x	Grab	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	438	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
Total Nitrogen (as N)	28	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)	1.6	x	x	x	Grab	0.1 mg/L	Colorimetric
Total Phosphorus (as P)	2.12	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Orthophosphate (as P) - unfiltered	0.98	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	Not available	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	<.10	x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

X=not tested

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW02Cobh

MONITORING POINT CODE: SW02Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<0.01	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	Not available	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	10	X	X	X	Grab	0.96 ug/L	ICP-MS
Chromium	31	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	<5	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	NA	X	X	X	Grab	<0.1mg/L	ISE
Lead	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	1.4	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	6	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	36	X	X	X	Grab	0.02 mg/L	ICP-OES

X=not tested

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW03Cobh

MONITORING POINT CODE: SW03Cobh

Parameter	Results (mg/l ^{Note 1})				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	24/10/2007	No further sample dates					
pH	9.1	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	1668	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	614	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	13.1	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	446	x	x	x	Grab	0.06 mg/L	Electrochemical
	1355	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Chemical Oxygen Demand							
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
	40	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Total Nitrogen (as N)							
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)	12.8	x	x	x	Grab	0.1 mg/L	Colorimetric
	6.1	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Total Phosphorus (as P)							
Orthophosphate (as P) - unfiltered	6.85	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	231	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	29.1	x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

X=not tested

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW03Cobh

MONITORING POINT CODE: SW03Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<0.01	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	<0.02	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	3	X	X	X	Grab	0.96 µg/L	ICP-MS
Chromium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	46	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	<5	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	x	X	X	X	Grab	<0.1mg/L	ISE
Lead	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	146	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	178	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	<0.2	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	5	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	51	X	X	X	Grab	0.02 mg/L	ICP-OES

X=not tested

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW04Cobh

MONITORING POINT CODE: SW04Cobh

Parameter	Results (mg/l ^{Note 1})				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	24/10/2007	No further sample dates					
pH	8.1	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	802	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	614	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	41.5	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	185	x	x	x	Grab	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	674	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
Total Nitrogen (as N)	64	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)	5.3	x	x	x	Grab	0.1 mg/L	Colorimetric
Total Phosphorus (as P)	9.55	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Orthophosphate (as P) - unfiltered	5.35	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	74	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	<0.1	x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

X=not tested

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW04Cobh

MONITORING POINT CODE: SW04Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<0.01	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	x	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<0.01	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	8	X	X	X	Grab	0.96 µg/L	ICP-MS
Chromium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	112	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	<5	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	x	X	X	X	Grab	<0.1mg/L	ISE
Lead	96	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	318	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	<0.2	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	<0.74	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	118	X	X	X	Grab	0.02 mg/L	ICP-OES

X=not tested

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW05Cobh

MONITORING POINT CODE: SW05Cobh

Parameter	Results (mg/l ^{Note 1})				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	24/10/2007	No further sample dates					
pH	7.4	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	674	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	284	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	28.9	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	333	x	x	x	Grab	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	782	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
Total Nitrogen (as N)	40	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)	x	x	x	x	Grab	0.1 mg/L	Colorimetric
Total Phosphorus (as P)	4.08	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Orthophosphate (as P) - unfiltered	3.39	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	53	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	<0.10	x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

X=not tested

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW05Cobh

MONITORING POINT CODE: SW05Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<0.01	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	x	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	2	X	X	X	Grab	0.96 µg/L	ICP-MS
Chromium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	51	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	<5	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	460	X	X	X	Grab	<0.1mg/L	ISE
Lead	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	45	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	<0.2	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	2	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	25	X	X	X	Grab	0.02 mg/L	ICP-OES

X=not tested

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW06Cobh

MONITORING POINT CODE: SW06Cobh

Parameter	Results (mg/l ^{Note 1})				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	24/10/2007	No further sample dates					
pH	7.1	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	610	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	202	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	21.1	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	329	x	x	x	Grab	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	666	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
Total Nitrogen (as N)	83	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)	x	x	x	x	Grab	0.1 mg/L	Colorimetric
Total Phosphorus (as P)	3.75	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Orthophosphate (as P) - unfiltered	3.0	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	88	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	<0.1	x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

X=not tested

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW06Cobh

MONITORING POINT CODE: SW06Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<0.01	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	<0.02	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	1	X	X	X	Grab	0.96 µg/L	ICP-MS
Chromium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	33	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	<5	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	470	X	X	X	Grab	<0.1mg/L	ISE
Lead	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	80	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	<0.2	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	2	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	43	X	X	X	Grab	0.02 mg/L	ICP-OES

X=not tested

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW07Cobh

MONITORING POINT CODE: SW07Cobh

Parameter	Results (mg/l ^{Note 1})			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
pH	8.4	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	754	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	579	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	42.6	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	271	x	x	x	Grab	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	1074	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
Total Nitrogen (as N)	64	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)	x	x	x	x	Grab	0.1 mg/L	Colorimetric
Total Phosphorus (as P)	8.23	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Orthophosphate (as P) - unfiltered	5.72	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	73	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	<0.10	x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

X=not tested

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW07Cobh

MONITORING POINT CODE: SW07Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<1	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	<0.02	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	1	X	X	X	Grab	0.96 µg/L	ICP-MS
Chromium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	150	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	<5	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	560	X	X	X	Grab	<0.1mg/L	ISE
Lead	120	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	446	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	42	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	<0.2	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	3	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	135	X	X	X	Grab	0.02 mg/L	ICP-OES

X=not tested

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW08Cobh

MONITORING POINT CODE: SW08Cobh

Parameter	Results (mg/l ^{Note 1})				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	24/10/2007	No further sample dates					
pH	7.4	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	27600	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	366	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	8.2	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	134	x	x	x	Grab	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	669	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
Total Nitrogen (as N)	434*	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)	x	x	x	x	Grab	0.1 mg/L	Colorimetric
Total Phosphorus (as P)	2.55	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Orthophosphate (as P) - unfiltered	Not available	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	1485*	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	<0.10	x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.

NOTE 2: USEPA METHOD 604, AWWA STANDARD METHOD 6240, OR EQUIVALENT. X=not tested

***=interference in method from salinity of sample**

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW08Cobh

MONITORING POINT CODE: SW08Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<1	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	x	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	36*	X	X	X	Grab	0.96 ug/L	ICP-MS
Chromium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	42	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	10*	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	620	X	X	X	Grab	<0.1mg/L	ISE
Lead	32	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	86	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	2998*	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	<0.2	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	151*	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	35	X	X	X	Grab	0.02 mg/L	ICP-OES

***=interference in method from salinity of sample**

X=not tested

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW09Cobh

MONITORING POINT CODE: SW09Cobh

Parameter	Results (mg/l ^{Note 1})				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	24/10/2007	No further sample dates					
pH	7.1	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	916	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	3066	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	61.3	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	1719	x	x	x	Grab	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	4310	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
Total Nitrogen (as N)	131	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)		x	x	x	Grab	0.1 mg/L	Colorimetric
Total Phosphorus (as P)	70.25	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Orthophosphate (as P) - unfiltered	13.04	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	57	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	178	x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

X=not tested

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW09Cobh

MONITORING POINT CODE: SW09Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<1	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	x	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	3	X	X	X	Grab	0.96 µg/L	ICP-MS
Chromium	55	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	339	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	<5	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	310	X	X	X	Grab	<0.1mg/L	ISE
Lead	311	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	50	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	940	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	40	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	<0.2	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	1	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	458	X	X	X	Grab	0.02 mg/L	ICP-OES

X=not tested

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW10Cobh

MONITORING POINT CODE: SW10Cobh

Parameter	Results (mg/l ^{Note 1})				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	24/10/2007	No further sample dates					
pH	8.0	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	44400	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	280	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	0.7	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	Not available	x	x	x	Grab	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	358	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
Total Nitrogen (as N)	Not available	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)	x	x	x	x	Grab	0.1 mg/L	Colorimetric
Total Phosphorus (as P)	0.35	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Orthophosphate (as P) - unfiltered	<0.05	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	2488*	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	<0.10	x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

X=not tested

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW10Cobh

MONITORING POINT CODE: SW10Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<0.01	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	x	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	14*	X	X	X	Grab	0.96 ug/L	ICP-MS
Chromium	92*	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	<5	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	730	X	X	X	Grab	<0.1mg/L	ISE
Lead	34	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	4247*	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	<0.2	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	55*	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	41	X	X	X	Grab	0.02 mg/L	ICP-OES

*=INTERFERENCE IN METHOD FROM SALINITY OF SAMPLE

X=not tested

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

(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: SW11Cobh

MONITORING POINT CODE: SW11Cobh

Parameter	Results (mg/l ^{Note 1})			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
pH	7.7	x	x	x	Grab	2	Electrochemical
Temperature	Not available	x	x	x	Grab	N/A	N/A
Electrical Conductivity (@20°C)	633	x	x	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	166	x	x	x	Grab	0.5 mg/L	Gravimetric
Ammonia (as N)	52	x	x	x	Grab	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	199	x	x	x	Grab	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	500	x	x	x	Grab	8 mg/L	Digestion + Calorimetric
Dissolved Oxygen	Not available	x	x	x	Grab	N/A	N/A
Hardness (as CaCO ₃)	Not available	x	x	x	Grab	N/A	N/A
Total Nitrogen (as N)	37	x	x	x	Grab	0.5 mg/L	Digestion + Calorimetric
Nitrite (as N)	Not available	x	x	x	Grab	N/A	N/A
Nitrate (as N)	Not available	x	x	x	Grab	0.1 mg/L	Colorimetric
Total Phosphorus (as P)	7.23	x	x	x	Grab	0.2 mg/L	Digestion + Calorimetric
Orthophosphate (as P) - unfiltered	5.37	x	x	x	Grab	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	68	x	x	x	Grab	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	<0.1	x	x	x	Grab	0.1 µg/L	GC-MS 2

Note 1: Or other unit as appropriate – please specify.

NOTE 2: USEPA METHOD 604, AWWA STANDARD METHOD 6240, OR EQUIVALENT.

X=not tested

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: SW11Cobh

MONITORING POINT CODE: SW11Cobh

Parameter	Results (µg/l)			Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique	
	24/10/2007	No further sample dates					
Atrazine	<0.01	X	X	X	Grab	0.96 µg/L	HPLC
Dichloromethane	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	X	X	X	Grab	0.01 µg/L	HPLC
Toluene	<1	X	X	X	Grab	0.02 µg/L	GC-MS 1
Tributyltin	<0.02	X	X	X	Grab	0.02 µg/L as Sn	GC-MS 1
Xylenes	<1	X	X	X	Grab	1 µg/L	GC-MS 1
Arsenic	<0.96	X	X	X	Grab	0.96 µg/L	ICP-MS
Chromium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Copper	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Cyanide	<5	X	X	X	Grab	5 µg/L	Colorimetric
Fluoride	530	X	X	X	Grab	<0.1mg/L	ISE
Lead	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Nickel	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Zinc	62	X	X	X	Grab	0.02 mg/L	ICP-OES
Boron	75	X	X	X	Grab	0.02 mg/L	ICP-OES
Cadmium	<20	X	X	X	Grab	0.02 mg/L	ICP-OES
Mercury	<0.2	X	X	X	Grab	0.2 µg/L	ICP-MS
Selenium	1	X	X	X	Grab	0.74 µg/L	ICP-MS
Barium	31	X	X	X	Grab	0.02 mg/L	ICP-OES

X=not tested

Table F2 – F2 IS NOT APPLICABLE IN RELATION TO COBH WASTEWATER DISCHARGES.

Section G:

Table G

AGGLOMERATION	G1- COMPLIANCE WITH COUNCIL DIRECTIVES	G2- COMPLIANCE WITH QUALITY STANDARDS FOR PHOSPHOROUS REGULATIONS (SI No. 258 of 1998)	G3-IMPACT MITIGATION	G4- STORM OVERFLOWS.
1	Blarney	No information to hand on this.	Blarney (Blarney/Tower) has recently been upgraded to 13,000 p.e. secondary treatment and <i>includes nutrient removal</i> . No additional upgrading is proposed at this time.	No further works identified as necessary at this time. No programme of improvements at this time
2	Crosshaven	Forms an element of the proposed Lower Harbour SS. Will be served by the Lower Harbour Wastewater Treatment Plant the EIS for which will be lodged with An Bord Pleanála at end 2007. The Preliminary Report is also at an advanced stage and will be lodged with DEHLG in February 2008. The reports will address all relevant environmental and drainage issues.	Nutrient removal is not envisaged as discharge is not to sensitive waters	Will be addressed in the Preliminary Report.
3	Cobh	As for Crosshaven	As for Crosshaven	As for Crosshaven
4	Carrigaline	As for Crosshaven	As for Crosshaven	As for Crosshaven
5	Ringaskiddy	As for Crosshaven	As for Crosshaven	As for Crosshaven
6	Carrigtwohill	First phase proposal is to increase capacity to 45,000 p.e. secondary treatment. EIS and PR will address these issues	Nutrient removal is being proposed in the EIS and PR as the discharge area is currently designated a sensitive area.	EIS to ABP March '08
Attachment included				
1/ Assessment of Needs				
2/ Water Services Investment programme 2007-2009				
			Yes	No
			Yes	Yes

For inspection purposes only. Consent of copyright owner required for any other use.

Cork County

Water Services Investment Programme 2007 - 2009

Schemes at Construction	W/S	Est. Cost	W/S	Est. Cost
Cork North				
Mitchelstown Sewerage Scheme (Nutrient Removal)	S	221,000		
Cork South				
Ballyourney/ Ballymakeery Sewerage Scheme	S	3,049,000		
Cobh/Midleton/ Carrigtwohill Water Supply Scheme	W	10,135,000		
Cork Lower Harbour Sewerage Scheme (Crosshaven SS) (G)	S	4,850,000		
Cork Water Strategy Study (G)	W	941,000		
Kinsale Sewerage Scheme	S	20,000,000		
Midleton Sewerage Scheme (Infiltration Reduction) (G)	S	2,078,000		
		41,274,000		
Schemes to start 2007				
Cork North				
North Cork Grouped DBO Wastewater Treatment Plant (Buttevant, Doneraile & Kilbrin)	S	5,150,000		
Cork West				
Skibbereen Sewerage Scheme	S	20,000,000		
		25,150,000		
Schemes to start 2008				
Cork North				
Mallow/ Ballyvinter Regional Water Supply Scheme (H)	W	8,652,000		
Mallow Sewerage Scheme (H)	S	5,408,000		
Cork South				
Ballincollig Sewerage Scheme (Nutrient Removal) (G)	S	948,000		
Ballingeary Sewerage Scheme	S	1,296,000		
Bandon Sewerage Scheme Stage 2	S	14,729,000		
City Environs (CASP) Strategic Study (G)	S	153,000		
Cloghroe Sewerage Scheme (Upgrade)	S	683,000		
Coachford Water Supply Scheme	W	1,318,000		
Garretstown Sewerage Scheme	S	2,153,000		
Inniscarra Water Treatment Plant Extension Phase 1	W	2,678,000		
Little Island Sewerage Scheme (G)	S	2,200,000		
Cork West				
Bantry Sewerage Scheme	S	7,148,000		
Dunmanway Sewerage Scheme	S	2,153,000		
Leap/ Baltimore Water Supply Scheme	W	6,365,000		
Schull Water Supply Scheme	W	5,253,000		
		61,137,000		
Schemes to start 2009				
Cork North				
Banteer/Dromahane Regional Water Supply Scheme	W	1,576,000		
Conna Regional Water Supply Scheme Extension	W	2,627,000		
Cork NE Water Supply Scheme	W	4,326,000		
Cork NW Regional Water Supply Scheme	W	6,046,000		
Millstreet Wastewater Treatment Plant (Upgrade)	S	1,628,000		
Cork South				
Ballincollig Sewerage Scheme (Upgrade) (G)	S	22,248,000		
Cork Lower Harbour Sewerage Scheme (excl. Crosshaven SS)	S	73,542,000		
Shannagary/ Garryvoe/ Ballycotton Sewerage Scheme	S	3,780,000		
Youghal Sewerage Scheme	S	14,420,000		
Cork West				
Ballydeobh Sewerage Scheme	S	683,000		
Bantry Water Supply Scheme	W	14,935,000		
Clonakilty Sewerage Scheme (Plant Capacity Increase)	S	3,677,000		
Courtmacsherry/ Timoleague Sewerage Scheme	S	2,472,000		
Dunmanway Regional Water Supply Scheme Stage 1	W	12,669,000		
		164,629,000		
Serviced Land Initiative				
Cork North				
Ballyclough Water Supply Scheme	W	139,000		
Ballynoleely Improvement Scheme	W/S	139,000		
Broganhill Rathgoggin Sewerage Scheme	S	406,000		
Bweeng Water Supply Scheme	W	115,000		
Churchtown Sewerage Scheme (incl. Water)	W/S	543,000		
Clondulane Sewage Treatment Plant	S	417,000		
Freemount Sewerage Scheme	S	150,000		
Pike Road Sewerage Scheme (incl. Water)	W/S	2,080,000		
Rathcoormac Sewerage Scheme (incl. Water)	W/S	555,000		
Spa Glen Sewerage Scheme	S	736,000		
Uplands Fermoy Sewerage Scheme (incl. Water)	W/S	1,174,000		
Watergrasshill Water Supply Scheme (incl. Sewerage) (G)	W/S	4,151,000		
Cork South				
Ballincollig Sewerage Scheme (Bary's Rd Foul and Storm Drainage) (G)	S	1,164,000		
Belgooley Water Supply Scheme (incl. Sewerage)	W/S	2,913,000		
Blamey Water Supply Scheme (Ext. to Station Rd) (G)	W	416,000		
Carrigtwohill Sewerage Scheme (Treatment and Storm Drain) (G)	S	7,632,000		
Castlematr Wastewater Treatment Plant Extension	S	1,200,000		
Crookstown Sewerage Scheme (incl. Water)	W/S	1,200,000		
Dripsey Water Supply Scheme (incl. Sewerage)	W/S	1,112,000		
Glounthane Sewerage Scheme (G)	S	1,576,000		
Innishannon Sewerage Scheme	S	277,000		
Innishannon Wastewater Treatment Plant	S	694,000		
Kernypike Sewerage Scheme	S	832,000		
Kernypike Water Supply Scheme	W	416,000		
Killeagh Wastewater Treatment Plant Extension	S	1,200,000		
Killeagh Water Supply Scheme (includes Sewerage)	W/S	485,000		
Killeens Sewerage Scheme	S	420,000		
Kilnagleary Sewerage Scheme	S	694,000		
Midleton Wastewater Treatment Plant Extension	S	4,050,000		

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, Ballincollig & Chetwind) (G)	W	8,500,000
Saleen Sewerage Scheme	S	1,051,000	Inniscarra Water Treatment Plant (Sludge Treatment)(G)W		5,356,000
Youghal Water Supply Scheme	W	2,300,000	Macroon Sewerage Scheme	S	5,150,000
			Minane Bridge Water Supply Scheme	W	1,421,000
Cork West			Cork West		
Castletownshend Sewerage Scheme	S	1,576,000	Bantry Regional Water Supply Scheme (Distribution)	W	9,455,000
		50,797,000	Cape Clear Water Supply Scheme	W	1,679,000
Rural Towns & Villages Initiative			Castletownbere Regional Water Supply Scheme	W	8,405,000
Cork North			Glengarriff Sewerage Scheme	S	2,500,000
Buttevant Sewerage Scheme (Collection System)	S	2,446,000	Roscarberry/Owenahincha Sewerage Scheme	S	1,576,000
Doneraile Sewerage Scheme (Collection System)	S	1,738,000	Skibbereen Regional Water Supply Scheme Stage 4	W	7,880,000
					95,646,000
Cork South			Water Conservation Allocation		12,206,000
Innishannon (Ballinadee/ Ballinspittle/ Garrettstown) Water Supply Scheme	W	6,726,000			
			Asset Management Study		300,000
Cork West					
Ballylicky Sewerage Scheme	S	2,153,000	South Western River Basin District (WFD) Project¹		9,400,000
Baltimore Sewerage Scheme	S	3,162,000			
Castletownbere Sewerage Scheme	S	5,202,000			
Schull Sewerage Scheme	S	3,523,000			
		24,950,000	Programme Total		485,489,000
Schemes to Advance through Planning					
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			

¹ 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

Kevin Sugrue,
Senior Engineer,
Water Services

Re: Licensing of Discharges

Ballincollig- Donald Cronin is preparing a response in respect of Ballincollig

Blarney- The Council has recently completed an upgrade of the wastewater treatment plant at Blarney to 13,000 p.e. and has no immediate proposals to increase that capacity. The plant at Blarney has two independent secondary treatment processes with the wastewater load being split approximately evenly between them. One stream has biological nutrient removal and the other has chemical nutrient removal. There is concern in relation to the nutrient levels in the river catchments north of Cork City and the Council has obtained approval to carry out a drainage study, the City Environs (CASP) Drainage Study which is being funded under the Water Services Investment Programme 2007-2009. This study will consider the drainage options available for the catchment concerned having regard to existing and planned developments in the area. The Council is currently preparing a brief for the appointment of a consultant and expects to advertise the appointment in early January 2008 and to have the study completed in approx six months thereafter.

Crosshaven- wastewater from Crosshaven is collected and discharged to the Carrigaline network and ultimately discharges to Cork Harbour via the 'IDA' sewer at the Dognose Bank. The discharge is currently untreated but will ultimately be served by the Lower Harbour SS, the treatment plant for which will be located at Carrigaline East and the effluent from this plant will discharge through the 'IDA' outfall to the harbour. The EIS for the wastewater treatment plant is being prepared and the Council hopes to lodge it with ABP by end of 2007. Nutrient removal is not being proposed as the receiving waters are not designated sensitive. The PR for the Scheme will be lodged with the DEHLG shortly after the EIS is sent to ABP but approval to the PR will not issue until after the EIS is approved, say mid 2008. The Lower Harbour SS is being funded under the Water Services Investment Programme 2007-2009 and the scheme is expected to be fully operational before the end of 2012.

Cobh – this also forms part of the proposed Lower Harbour SS and a significant upgrading of the Cobh sewer network is envisaged with the wastewater being pumped across the harbour to the proposed WWTP at Carrigaline East. The current estimated design capacity required is 80,000 p.e.

Carrigaline- this wastewater is discharged (see Crosshaven) via the 'IDA' sewer and will ultimately form part of the Lower Harbour SS

Ringaskiddy – as for Carrigaline

Carrigtwohill –EIS under preparation and expected to be submitted to ABP March '08. The anticipated first phase will be to increase treatment capacity to 45000 p.e. from the current 8500 p.e. . The works are to be funded under the Serviced land Initiative. Nutrient removal will be included in the EIS and the PR as the Lee Estuary/Lough Mahon Area is currently designated a sensitive water.

The above information should be read in conjunction with earlier correspondence on the same matter and in particular you should cross-reference with response received from Duane O'Brien in relation to Carrigtwohill.

Regards,

R O'Farrell,
Senior Engineer,
WSIP Projects Office
4th December 2007

For inspection purposes only.
Consent of copyright owner required for any other use.

SECTION H: DECLARATION

Declaration

I hereby make application for a waste water discharge licence/revised licence, pursuant to the provisions of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this application itself and to any further information or submission, whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Signed by: *Patricia Power* Date: 14 Dec 07
(on behalf of the organisation)

Print signature name: PATRICIA POWER

Position in organisation: Director of Services

For inspection purposes only. Consent of copyright owner required for any other use.

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 contain(s) the information requested in the appropriate sub-article.

Regulation 16(1) In the case of an application for a waste water discharge licence, the application shall -		Attachment Number	Checked by Applicant ✓
(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,		
(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 waste water treatment plant and/or the waste water discharge point or points to which the application relates,		
(d)	state the population equivalent of the agglomeration to which the application relates,		
(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,		
(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.		

Regulation 16(1) continued.../		Attachment Number	Checked by Applicant ✓
(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,		
(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,		
(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,		
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,		
(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.		
(l)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,		
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.		
(n)	Any other information as may be stipulated by the Agency.		
Regulation 16(3) Without prejudice to Regulation 16 (1) and (2), an application for a licence shall be accompanied by -		Attachment Number	Checked by the applicant ✓
(a)	a copy of the notice of intention to make an application given pursuant to Regulation 9,		
(b)	where appropriate, a copy of the notice given to a relevant water services authority under Regulation 13,		

(c)	Such other particulars, drawings, maps, reports and supporting documentation as are necessary to identify and describe, as appropriate -		
	(i) the point or points, including storm water overflows, from which a discharge or discharges take place or are to take place, and		
	(ii) the point or points at which monitoring and sampling are undertaken or are to be undertaken,		
(d)	such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		
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.			
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 format specified by the Agency.			
	Signed original.		
	2 hardcopies of application provided or 2 CD versions of application (PDF files) provided.		
	1 CD of geo-referenced digital files provided.		
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			
	EIA provided if applicable		
	2 hardcopies of EIS provided if applicable.		
	2 CD versions of EIS, as PDF files, provided.		