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SW - 01 CARRIG
O.S. CO-ORDINATES
E - 180594
N - 072283

Existing
WWTP

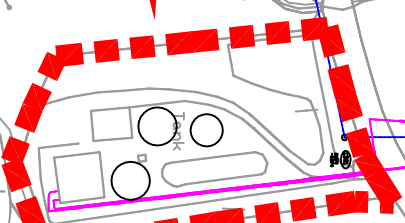
LEGEND:

EXISTING FOUL SEWER	—
EXISTING STORM SEWER	—
EXISTING COMBINED SEWER	—
EXISTING RISING MAIN	—
WWTP SITE BOUNDARY	—

AMENDMENT DETAILS		DATE
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Tel: 295 2321 Fax: 295 4541		
PROJECT: CARRIGTOHILL - DISCHARGE L.A. APPLICATION		
CLIENT: CORK COUNTY COUNCIL		
DRAWING TITLE: PRIMARY DISCHARGE		
SCALE: 1 : 2500 (A3)	JOB NO:	DRAWING NO:
DATE: DEC 07	DRAWN BY: 2783	B3-01CARRIG



Existing
WWTP



Sewage
Treatment
Plant

SW - 03 CARRIG (NOT COMMISSIONED)
O.S. CO-ORDINATES
E - 180594
N - 072283

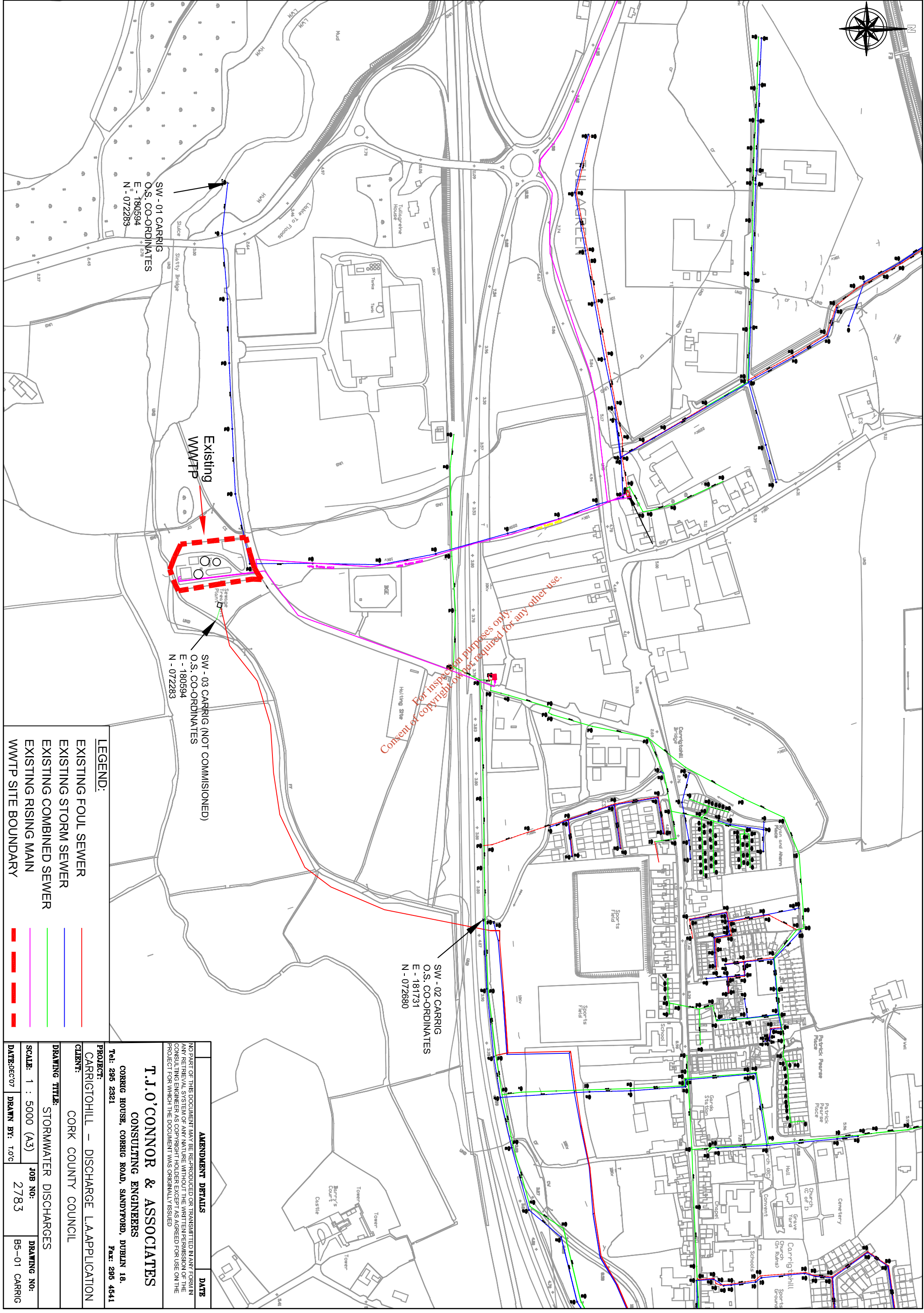
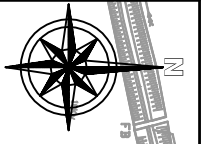
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SW - 02 CARRIG
O.S. CO-ORDINATES
E - 181731
N - 072680

LEGEND:

EXISTING FOUL SEWER	—
EXISTING STORM SEWER	—
EXISTING COMBINED SEWER	—
EXISTING RISING MAIN	—
WWTP SITE BOUNDARY	—

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Tel: 295 2321		Fax: 295 4541
PROJECT: CARRIGTOHILL - DISCHARGE L.A. APPLICATION		
CLIENT: CORK COUNTY COUNCIL		
DRAWING TITLE: SECONDARY DISCHARGES		
SCALE: 1 : 2500 (A3)	JOB NO.: 2783	DRAWING NO.: B4-01 CARRIG
DATE: DEC 07	DRAWN BY: T.O'C	



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WWTP

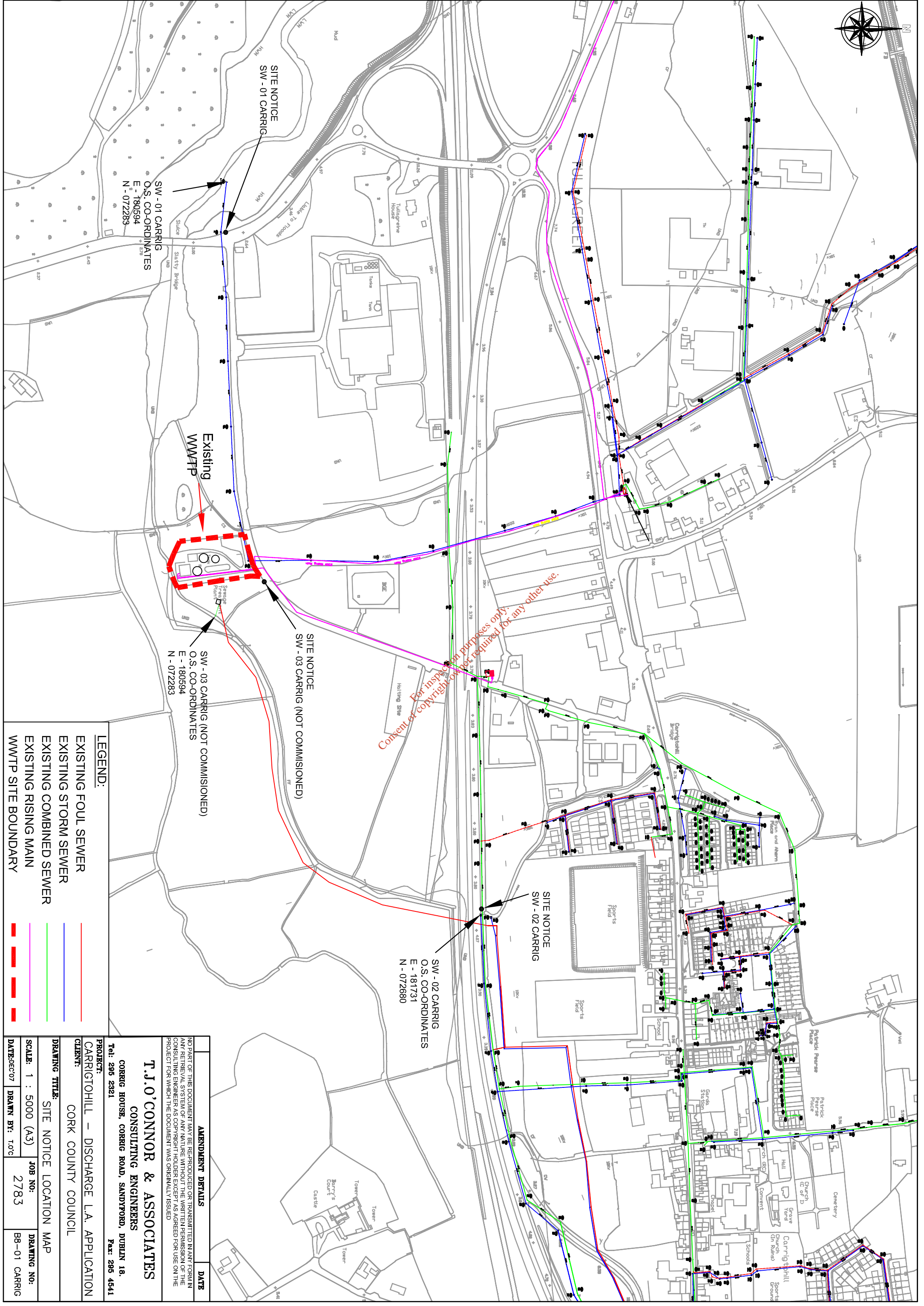
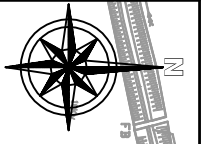
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LEGEND:

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- WWTP SITE BOUNDARY

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Tel: 295 2321		Fax: 295 4541
PROJECT: CARRIGTOHILL - DISCHARGE L.A.APPLICATION		
CLIENT: CORK COUNTY COUNCIL		
DRAWING TITLE: STORMWATER DISCHARGES		
SCALE: 1 : 5000 (A3)	JOB NO: 2783	DRAWING NO: B5-01 CARRIG
DATE: DEC 07	DRAWN BY:	



SITE NOTICE
SW - 01 CARRIG
O.S. CO-ORDINATES
E - 180594
N - 072283

Existing
WWTP

SW - 03 CARRIG (NOT COMMISSIONED)
O.S. CO-ORDINATES
E - 180594
N - 072283

SITE NOTICE
SW - 03 CARRIG (NOT COMMISSIONED)

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SW - 02 CARRIG
O.S. CO-ORDINATES
E - 181731
N - 072680

SITE NOTICE
SW - 02 CARRIG

LEGEND:

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Tel: 295 2321		Fax: 295 4541
PROJECT: CARRIGTOHILL - DISCHARGE L.A. APPLICATION		
CLIENT: CORK COUNTY COUNCIL		
DRAWING TITLE: SITE NOTICE LOCATION MAP		
SCALE: 1 : 5000 (A3)	JOB NO: 2783	DRAWING NO: B8-01 CARRIG
DATE: DEC 07	DRAWN BY: 10°C	



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 SI No. 684 of 2007, Water Services Southern Division of Cork County Council, County Hall, Carrigrohane Road, Cork is applying to the Environmental Protection Agency for a Waste Water Discharge Licence in respect of Carrigwohill Wastewater Treatment Plant serving the agglomeration of Carrigwohill

Plant Name	Location	National Grid Ref.
Carrigwohill WWTP	Tullagreen Carrigwohill, Co. Cork Townland of Carrigtohill	E181177 N72228

Discharge	Function	Townland	Receptor	Grid Reference
Primary	Main Outfall	Tullagreen	Slatty Waters Cork Harbour	E180600 N72278
Secondary	Emergency	Tullagreen	Barryscourt Stream	E181731 N72685

It is intended to submit the Environmental Impact Statement associated with the proposed upgrading of the Waste Water Treatment Plant 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

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
Ballyourney/ 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
Schemes to start 2007				Dunmanway Regional Water Supply Scheme Stage 1	W 12,669,000
Cork North					164,629,000
North Cork Grouped DBO Wastewater Treatment Plant (Buttevant, Doneraile & Kilbrin)	S	5,150,000		Serviced Land Initiative	
Cork West				Cork North	
Skibbereen Sewerage Scheme	S	20,000,000		Ballyclough Water Supply Scheme	W 139,000
		25,150,000		Ballydooley Improvement Scheme	W/S 139,000
Schemes to start 2008				Broghill-Rathgoggin Sewerage Scheme	S 406,000
Cork North				Bweeng Water Supply Scheme	W 115,000
Mallow/ Ballyvinter Regional Water Supply Scheme (H) W	W	8,652,000		Churchtown Sewerage Scheme (incl. Water)	W/S 543,000
Mallow Sewerage Scheme (H)	S	5,408,000		Clondulane Sewage Treatment Plant	S 417,000
Cork South				Freemount Sewerage Scheme	S 150,000
Ballincollig Sewerage Scheme (Nutrient Removal) (G)	S	948,000		Pike Road Sewerage Scheme (incl. Water)	W/S 2,080,000
Ballingeary Sewerage Scheme	S	1,296,000		Rathcormac Sewerage Scheme (incl. Water)	W/S 555,000
Bandon Sewerage Scheme Stage 2	S	14,729,000		Spa Glen Sewerage Scheme	S 736,000
City Environs (CASP) Strategic Study (G)	S	153,000		Uplands Fermoy Sewerage Scheme (incl. Water)	W/S 1,174,000
Cloghroe Sewerage Scheme (Upgrade)	S	683,000		Watergrasshill Water Supply Scheme (incl. Sewerage) (G)	W/S 4,151,000
Coachford Water Supply Scheme	W	1,318,000		Cork South	
Garretstown Sewerage Scheme	S	2,153,000		Ballincollig Sewerage Scheme (Barry's Rd Foul and Storm Drainage) (G)	S 1,164,000
Inniscarra Water Treatment Plant Extension Phase 1	W	2,678,000		Belgooley Water Supply Scheme (incl. Sewerage)	W/S 2,913,000
Little Island Sewerage Scheme (G)	S	2,200,000		Blamey Water Supply Scheme (Ext. to Station Rd) (G)	W 416,000
Cork West				Carrigtwohill Sewerage Scheme (Treatment and Storm Drain) (G)	S 7,632,000
Bantry Sewerage Scheme	S	7,148,000		Castlemartyr Wastewater Treatment Plant Extension	S 1,200,000
Dunmanway Sewerage Scheme	S	2,153,000		Crookstown Sewerage Scheme (incl. Water)	W/S 1,200,000
Leap/ Baltimore Water Supply Scheme	W	6,365,000		Dripsey Water Supply Scheme (incl. Sewerage)	W/S 1,112,000
Schull Water Supply Scheme	W	5,253,000		Glounthane Sewerage Scheme (G)	S 1,576,000
		61,137,000		Innishannon Sewerage Scheme	S 277,000
Schemes to start 2009				Innishannon Wastewater Treatment Plant	S 694,000
Cork North				Kerypike Sewerage Scheme	S 832,000
Banteer/Dromahane Regional Water Supply Scheme	W	1,576,000		Kerypike Water Supply Scheme	W 416,000
Conna Regional Water Supply Scheme Extension	W	2,627,000		Killeagh Wastewater Treatment Plant Extension	S 1,200,000
Cork NE Water Supply Scheme	W	4,326,000		Killeagh Water Supply Scheme (includes Sewerage)	W/S 485,000
Cork NW Regional Water Supply Scheme	W	6,046,000		Killeens Sewerage Scheme	S 420,000
Millstreet Wastewater Treatment Plant (Upgrade)	S	1,628,000		Kinagleary 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)		
Salen Sewerage Scheme	S	1,051,000	Ballincollig & Chetwind (G)	W	8,500,000
Youghal Water Supply Scheme	W	2,300,000	Inniscarra Water Treatment Plant (Sludge Treatment)(G)W		5,356,000
Cork West			Macroon Sewerage Scheme	S	5,150,000
Castletownshend Sewerage Scheme	S	1,576,000	Minane Bridge Water Supply Scheme	W	1,421,000
		50,797,000	Cork West		
Rural Towns & Villages Initiative			Bantry Regional Water Supply Scheme (Distribution)	W	9,455,000
Cork North			Cape Clear Water Supply Scheme	W	1,679,000
Buttevant Sewerage Scheme (Collection System)	S	2,446,000	Castletownbere Regional Water Supply Scheme	W	8,405,000
Doneraile Sewerage Scheme (Collection System)	S	1,738,000	Glengarriff Sewerage Scheme	S	2,500,000
Cork South			Roscarberry/Owenahincha Sewerage Scheme	S	1,576,000
Innishannon (Ballinadee/ Ballinspittle/ Garrettstown)			Skibbereen Regional Water Supply Scheme Stage 4	W	7,880,000
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

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.

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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 <i>includes nutrient removal</i> . 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 80% DEHLG grant , 20% local funding
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	€76m Estimated 80% DEHLG grant and 20% local funding
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	Carrigrohilly	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	

SECTION C: INFRASTRUCTURE & OPERATION

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

C.1 Operational Information Requirements

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.

Main outfall is 1200mm diameter concrete pipe,
 Secondary outfall SW2 is 1050mm diameter concrete pipe
 Secondary outfall SW3 is 900mm diameter concrete pipe (not yet commissioned)

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 C1-01carrig	Yes	No
	X	

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.1 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, 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 Carrigtwohill

Source of Emission:	Treated wastewater from Carrigtwohill wastewater treatment plant+ surface water and storm water overflow
Location:	Townland of Tullagreen
Grid Ref. (12 digit, 6E, 6N):	E180600 N72278
Name of receiving waters:	Slatty Waters Cork Harbour
River Basin District:	South Western River Basin District
Designation of receiving waters:	NHA, SAC,SPA
Flow rate in receiving waters: Harbour area not available	not available $m^3 \cdot sec^{-1}$ Dry Weather Flow not available $m^3 \cdot sec^{-1}$ 95%ile flow

Emission Details:

(i)	Volume emitted
Normal/day	1804.6m ³ Maximum/day
Maximum rate/hour	108m ³ Period of emission (avg)
Dry Weather Flow	m ³ /sec
	24 Hours continuous min/hr hr/day day/yr
	2586m ³

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

Discharge Point Code: SW01 Carrigtwohill

Number	Substance	As discharged
1	pH	Max. daily average 7.6
2	Temperature	NA
3	Electrical Conductivity(@25°C)	840
4	Suspended Solids	Max. daily average (mg/l) 49.2
5	Ammonia (as N)	88.8
6	Biochemical Oxygen Demand	18.2
7	Chemical Oxygen Demand	46.3
8	Total Nitrogen (as N)	2.14
9	Nitrite (as N)	37.6
10	Nitrate (as N)	NA
11	Total Phosphorus (as P)	216
12	Orthophosphate (as P) ^{Note 1}	3.29
13	Sulphate (SO ₄)	1.99
14	Phenols (sum) ^{Note 2} (ug/l)	52.4
		<0.10
		<0.0002

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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: SW01 Carrigtwohill

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine	<0.01	<0.0000	<0.0
2	Dichloromethane	<1	<0.0018	<0.6570
3	Simazine	<0.01	<0.0000	<0.0
4	Toluene	<0.01	<0.0000	<0.0
5	Tributyltin	<0.02	<0.0000	<0.0
6	Xylenes	<0.01	<0.0000	<0.0
7	Arsenic	6	0.01083	3.95
8	Chromium	320	0.65175	21.08
9	Copper	41.8	0.07535	27.50
10	Cyanide	<5	<0.0090	3.29
11	Fluoride	250	0.4512	164.7
12	Lead	23.5	0.0754	27.5
13	Nickel	28	0.0505	18.4
14	Zinc	54.25	0.0979	35.73
15	Boron	20	<0.0361	<13.18
16	Cadmium	20	<0.0361	<13.18
17	Mercury	1.1	0.0019	0.6935
18	Selenium	2	0.0036	1.314
19	Barium	38	0.0686	25.04

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

Discharge Point Code: SW02 Carrigtwohill

Source of Emission:	Emergency Outfall Carrigtwohill
Location:	Townland of Tullagreen
Grid Ref. (12 digit, 6E, 6N):	E181731 N72685
Name of receiving waters:	Barryscourt Stream
River Basin District:	South Western River Basin District
Designation of receiving waters:	SPA,SAC,NHA
Flow rate in receiving waters: Not available	Not available $m^3 \cdot sec^{-1}$ Dry Weather Flow Not available $m^3 \cdot sec^{-1}$ 95%ile flow

Emission Details:

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

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

Discharge Point Code: SW02 Carrigtwohill

Number	Substance	As discharged	
		Max. daily average	kg/day
1	pH	NA	
2	Temperature	NA	
3	Electrical Conductivity (@25°C)	NA	
4	Suspended Solids	Max. daily average (mg/l)	kg/day
5	Ammonia (as N)	NA	NA
6	Biochemical Oxygen Demand	NA	NA
7	Chemical Oxygen Demand	NA	NA
8	Total Nitrogen (as N)	NA	NA
9	Nitrite (as N)	NA	NA
10	Nitrate (as N)	NA	NA
11	Total Phosphorus (as P) ^{Note 1}	NA	NA
12	Orthophosphate (as P)	NA	NA
13	Sulphate (SO ₄)	NA	NA
14	Phenols (sum) ^{Note 2} (ug/l)	NA	NA

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.

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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: SW02 Carrigtwohill

Number	Substance	As discharged		
		Max. daily average ($\mu\text{g/l}$)	kg/day	kg/year
1	Atrazine	NA	NA	NA
2	Dichloromethane	NA	NA	NA
3	Simazine	NA	NA	NA
4	Toluene	NA	NA	NA
5	Tributyltin	NA	NA	NA
6	Xylenes	NA	NA	NA
7	Arsenic	NA	NA	NA
8	Chromium	NA	NA	NA
9	Copper	NA	NA	NA
10	Cyanide	NA	NA	NA
11	Fluoride	NA	NA	NA
12	Lead	NA	NA	NA
13	Nickel	NA	NA	NA
14	Zinc	NA	NA	NA
15	Boron	NA	NA	NA
16	Cadmium	NA	NA	NA
17	Mercury	NA	NA	NA
18	Selenium	NA	NA	NA
19	Barium	NA	NA	NA

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

Discharge Point Code: SW03 Carrigtwohill

Source of Emission:	Barryscount pumphouse in Carrigtwohill Note -not due to be operational until late 2008
Location:	Townland of Tullagreen
Grid Ref. (12 digit, 6E, 6N):	E181288 N72283
Name of receiving waters:	Barryscount Stream
River Basin District:	South Western River Basin District
Designation of receiving waters:	SPA,SAC,NHA
Flow rate in receiving waters:	Not available $m^3 \cdot sec^{-1}$ Dry Weather Flow
Not available	Not available $m^3 \cdot sec^{-1}$ 95%ile flow

Emission Details:

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

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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: SW03 Carrigtwohill

Number	Substance	As discharged	
		Max. daily average	kg/day
1	pH	NA	
2	Temperature	NA	
3	Electrical Conductivity (@25°C)	NA	
4	Suspended Solids	Max. daily average (mg/l)	kg/day
5	Ammonia (as N)	NA	NA
6	Biochemical Oxygen Demand	NA	NA
7	Chemical Oxygen Demand	NA	NA
8	Total Nitrogen (as N)	NA	NA
9	Nitrite (as N)	NA	NA
10	Nitrate (as N)	NA	NA
11	Total Phosphorus (as P) ^{Note 1}	NA	NA
12	Orthophosphate (as P)	NA	NA
13	Sulphate (SO ₄)	NA	NA
14	Phenols (sum) ^{Note 2} (ug/l)	NA	NA

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.

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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: SW03 Carrigtwohill

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine	NA	NA	NA
2	Dichloromethane	NA	NA	NA
3	Simazine	NA	NA	NA
4	Toluene	NA	NA	NA
5	Tributyltin	NA	NA	NA
6	Xylenes	NA	NA	NA
7	Arsenic	NA	NA	NA
8	Chromium	NA	NA	NA
9	Copper	NA	NA	NA
10	Cyanide	NA	NA	NA
11	Fluoride	NA	NA	NA
12	Lead	NA	NA	NA
13	Nickel	NA	NA	NA
14	Zinc	NA	NA	NA
15	Boron	NA	NA	NA
16	Cadmium	NA	NA	NA
17	Mercury	NA	NA	NA
18	Selenium	NA	NA	NA
19	Barium	NA	NA	NA

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

Discharge Point Code: SW01Carrigtwohill

Source of Emission:	Storm Water Overflow Carrigtwohill
Location:	Townland of Tullagreen
Grid Ref. (12 digit, 6E, 6N):	E180600 N72278
Name of receiving waters:	Barrysourt Stream
River Basin District:	South Western River Basin District
Designation of receiving waters:	SAC,SPA,NHA
Flow rate in receiving waters:	Not available $m^3 \cdot sec^{-1}$ Dry Weather Flow
Not available	Not available $m^3 \cdot sec^{-1}$ 95%ile flow

Emission Details:

(1) Volume emitted Not available		
Normal/day	Not available m^3	Maximum/day
Maximum rate/hour	Not available m^3	Period of emission (avg)
		Not available m^3
		Not available min/hr hr/day day/yr

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

Discharge Point Code: SW02 Carrigtwohill

Source of Emission:	Storm Water Overflow Carrigtwohill
Location:	Townland of Tullagreen
Grid Ref. (12 digit, 6E, 6N):	E181731 N72685
Name of receiving waters:	Barrysourt Stream
River Basin District:	South Western River Basin District
Designation of receiving waters:	SAC,SPA,NHA
Flow rate in receiving waters:	Not available $m^3 \cdot sec^{-1}$ Dry Weather Flow Not available $m^3 \cdot sec^{-1}$ 95%ile flow

Emission Details:

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

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

Discharge Point Code: SW03Carrigtwohill

Source of Emission:	Storm Water Overflow Barryscourt Pump house (not operational until late 2008)	
Location:	Townland of Tullagreen	
Grid Ref. (12 digit, 6E, 6N):	E181288 N72283	
Name of receiving waters:	Barryscourt Stream	
River Basin District:	South Western River Basin District	
Designation of receiving waters:	SAC,SPA,NHA	
Flow rate in receiving waters:	Not available	m ³ .sec ⁻¹ Dry Weather Flow
	Not available	m ³ .sec ⁻¹ 95%ile flow

Emission Details:

(1) Volume emitted Not available		
Normal/day	Not available m ³	Maximum/day
Maximum rate/hour	Not available m ³	Period of emission (avg)
		Not available min/hr
		hr/day
		day/yr
		Not available m ³

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Table D.2: Carrigtwohill

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING	Verified
SW01Carrigtwohill	Primary	Cork County Council	Coastal	Slatty Water	SAC, NHA, SPA	180600	72278	No
SW02Carrigtwohill	Secondary	Cork County Council	Coastal	Slatty Water	SAC, NHA, SPA	181731	72685	No
SW03Carrigtwohill	Secondary	Cork County Council	Coastal	Slatty Water	SAC, NHA, SPA	181288	72283	No
SW01Carrigtwohill	Storm Overflow	Cork County Council	Coastal	Slatty Water	SAC, NHA, SPA	180600	72278	No
SW02Carrigtwohill	Storm Overflow	Cork County Council	Coastal	Slatty Water	SAC, NHA, SPA	181731	72685	No
SW03Carrigtwohill	Storm Overflow	Cork County Council	Coastal	Slatty Water	SAC, NHA, SPA	181288	72283	No

all to Cork Harbour

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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.

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.

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	

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

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m ³ /annum)
SW01 Carrigtwohill (P)	365 Days per annum	658460 (based on a calculated average 10mths)
SW02 Carrigtwohill	Not available	Not available
SW03 Carrigtwohill	Not available- Not Operational until late 2008	Not available- Not Operational until late 2008

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Table E3 MONITORING AND SAMPLING LOCATIONS

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
SW01Carrigtwohill	Primary +storm overflow	sampling	181731	72685	No
SW02Carrigtwohill	Emergency+storm o/flow	none	180600	72278	No
SW03Carrigtwohill* * not operational	Emergency+storm o/flow	none	181288	72283	No
DSW01Carrigtwohill	Discharge location at plant	sampling	181170	72269	No

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CARRIGTOWHILL SEWAGE TREATMENT PLANT

Sample Date	Sample	pH	BOD mg/L	COD mg/L	SS mg/L	TP mg/L	TN mg/L	NH ₃ mg/L	SO ₄	O-Po4-P	Cond 20C	Flow	Chromium	Copper	Lead	Nickel	Zinc	Barium	Cadmium	Boron	Fluoride	Nitrate as N
17/01/2007	Effluent	7.3	7.7	43	17	1.16	21															
07/03/2007	Effluent	8	26	114	35	1.99	37					1003										
04/04/2007	Effluent	7.9	129	314	72	10.23	46.6					1899										
30/05/2007	Effluent	7.6	18	131	26	0.94	42.4					2586	<0.02	0.068	<0.02	<0.02	0.046					
06/06/2007	Effluent	8	19	141	25	2.42	79					913										
04/07/2007	Effluent	7.4	59	319	82	4.8						1974										
08/08/2007	Effluent	7.5	37	517	57	2.36		35.8				1893	0.034	0.059	0.034	0.032	0.089					
05/09/2007	Effluent	7.5	102	275	100		20	18		1.87		2358	0.054	<0.02	<0.02	0.04	0.057	0.042				
24/10/2007	Effluent	7.3	19	72	29	2.49	17	0.8		2.04		2377						0.067	<0.02			
	Average	7.611111	46.3	214	49.222222	3.29875	37.57143	18.2	52.4333	2.06	840	1239	<0.02	<0.02	<0.02	0.025	<0.02	<0.02	0.02	0.02	0.25	2.16
	Kg/Day		83.556067	366.19867	88.829704	5.953144	67.8039	32.844933	94.6247	3.5912867	840	1804.667	0.032	0.04175	0.0235	0.028	0.05425	0.038	0.02	<0.036	0.45117	3.89808

Parameter	Method	Result	Units	Source	Kg/Day
Arsenic (OES)	ICP-OES	6	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	0.01083
Atrazine	HPLC	<0.01	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.00002
Cyanide	Colorimetry	<5	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.009023
Dichloromethane	GC-MS 1	<1	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.001805
EPH	GC-FID	<1	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.001805
Mercury (OES)	ICP-OES	1.1	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	0.00199
Phenols (Total)	GC-MS 2	<0.10	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.00018
Polyaromatic Hydrocarbons	HPLC	<0.01	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.00018
Selenium (OES)	ICP-OES	2	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	0.00361
Simazine	HPLC	<0.01	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.00002
Toluene	GC-MS 1	<0.01	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.00002
Total Organic Carbon	TOC analyser (NPOC)	13.20	mg/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.00002
TPH C10-C36	GC-FID	<1	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	23.8215
Tribuyltin*	GC-MS 1	<0.02	ug/L as Sn	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.001805
Xylene	GC-MS 1	<0.01	ug/L	GR1019 Carrigtohill WWTP Effluent 24/10/07	<0.00004

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CARRIGTWOHILL SEWAGE TREATMENT PLANT

Sample Date	Sample	pH	BOD mg/L	COD mg/L	SS mg/L	TP mg/L	TN mg/L	NH ₃ mg/L	SO ₄	O-P04-P	Cond 20C	Chromium	Copper	Lead	Nickel	Zinc	Barium	Cadmium	Boron	Nitrate as N	
04/07/2007	Influent																				
05/09/2007	Influent	7.3	36	2122.5	70	1.45	26	24.6	<30	6.97											
24/10/2007	Influent	7.3	36	138	70	1.45	26	3.9	53	0.8	646	0.034	<0.02	<0.02	<0.02	0.096	<0.02	<0.02	<0.02	<0.02	0.34
	Average	7.3	36	1130.25	70	1.45	26	14.25	53	3.885	646	0.034	<0.02	<0.02	<0.02	0.096	<0.02	<0.02	<0.02	<0.02	0.34

Parameter	Method	Result	Units	Source
Arsenic (OES)	ICP-OES	7	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Atrazine	HPLC	<0.01	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Cyanide	Colorimetry	<5	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Dichloromethane	GC-MS 1	<1	ug/L	GR1018 Carrigtwohill Influent 24/10/07
EPH	GC-FID	<1	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Mercury (OES)	ICP-OES	<0.2	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Phenols (Total)	GC-MS 2	<0.10	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Polyaromatic Hydrocarbons	HPLC	<0.01	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Selenium (OES)	ICP-OES	2	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Simazine	HPLC	<0.01	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Toluene	GC-MS 1	<0.01	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Total Organic Carbon	TOC analyser (NPOC)	13.80	mg/L	GR1018 Carrigtwohill Influent 24/10/07
TPH C10-C36	GC-FID	<1	ug/L	GR1018 Carrigtwohill Influent 24/10/07
Xylene	GC-MS 1	<0.01	ug/L	GR1018 Carrigtwohill Influent 24/10/07

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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.

- o 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.
- o 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.
- o 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.
- o 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)

- o Describe, where appropriate, measures for minimising pollution over long distances or in the territory of other states.
- o 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	

F.2 Tabular Data on Drinking Water Abstraction Point(s)

Applicants should submit the following information for each downstream or downgradient drinking water abstraction point. The zone of contribution for the abstraction point should be delineated and any potential risks from the waste water discharge to the water quality at that abstraction point identified.

ABS_CD	AGG_SERVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
Abstraction Code	Agglomeration served	Abstraction Volume in m ³ /day	Point Code Provide label ID's	Distance Downstream in meters from Emission Point to Abstraction Point	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

Note: Attach any risk assessment that may have been carried out in relation to the abstraction point(s) listed.

An individual record (i.e. row) is required for each abstraction 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 E.3.

Attachment F.2 should contain any supporting information.

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

Discharge Point Code: SW01 Carrig

MONITORING POINT CODE: SW01 Carrig

Parameter	Results (mg/l ^{Note 1})				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	July 4	Aug 8	Sept 5	Oct 24			
2007							
pH	7.4	7.5	7.5	7.3	Composite	2	Electrochemical
Temperature	NA	NA	NA	NA	Composite	N/A	N/A
Electrical Conductivity (@25°C)	NA	NA	NA	840	Composite	0.5 µmhos/cm	Electrochemical
Suspended Solids	82	57	100	29	Composite	0.5 mg/L	Gravimetric
Ammonia (as N)	35.8	NA	18	0.8	Composite	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	59	37	102	19	Composite	0.06 mg/L	Electrochemical
	319	517	275	72	Composite	8 mg/L	Digestion + Colorimetric
Chemical Oxygen Demand	NA	NA	NA	NA	Composite	N/A	N/A
Dissolved Oxygen	NA	NA	NA	NA	Composite	N/A	N/A
Hardness (as CaCO ₃)	NA	NA	20	17	Composite	0.5 mg/L	Digestion + Colorimetric
Total Nitrogen (as N)	NA	NA	NA	NA	Composite	N/A	N/A
Nitrite (as N)	NA	NA	NA	NA	Composite	0.5 mg/L	Digestion + Colorimetric
Nitrate (as N)	NA	NA	NA	NA	Composite	N/A	N/A
Total Phosphorus (as P)	4.80	2.36	NA	2.49	Composite	0.5 mg/L	Digestion + Colorimetric
Orthophosphate (as P) - unfiltered	NA	1.87	2.4	2.06	Composite	0.02 mg/L	Colorimetric
Sulphate (SO ₄)	70	NA	35.3	52	Composite	30 mg/L	Turbidimetric
Phenols (sum) ^{Note 2} (ug/l)	NA	NA	NA	<0.10	Composite	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.

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

Discharge Point Code: SW01 Carrig

MONITORING POINT CODE: SW01 Carrig

Parameter	Results (µg/l)				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	July 4	Aug 8	Sept 5	Oct 24			
2007							
Atrazine	NA	NA	NA	<0.01	Composite	0.96 µg/L	HPLC
Dichloromethane	NA	NA	NA	<1	Composite	1 µg/L	GC-MS 1
Simazine	NA	NA	NA	<0.01	Composite	0.01 µg/L	HPLC
Toluene	NA	NA	NA	<0.01	Composite	0.02 µg/L	GC-MS 1
Tributyltin	NA	NA	NA	<0.02	Composite	0.02 µg/L as Sn	GC-MS 1
Xylenes	NA	NA	NA	<0.01	Composite	1 µg/L	GC-MS 1
Arsenic	NA	NA	NA	6	Composite	0.96 µg/L	ICP-MS
Chromium	34	54	NA	20	Composite	20 µg/L	ICP-OES
Copper	59	20	NA	20	Composite	20 µg/L	ICP-OES
Cyanide	NA	NA	NA	<5	Composite	5 µg/L	Colorimetric
Fluoride	NA	NA	NA	250	Composite	100 µg/L	ISE
Lead	34	20	NA	20	Composite	20 µg/L	ICP-OES
Nickel	32	40	NA	20	Composite	20 µg/L	ICP-OES
Zinc	89	57	NA	25	Composite	20 µg/L	ICP-OES
Boron	NA	NA	NA	20	Composite	20 µg/L	ICP-OES
Cadmium	NA	20	NA	20	Composite	20 µg/L	ICP-OES
Mercury	NA	NA	NA	1.1	Composite	0.2 µg/L	ICP-OES
Selenium	NA	NA	NA	2	Composite	0.74 µg/L	ICP-MS
Barium	42	67	NA	20	Composite	20 µg/L	ICP-OES

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TABLE F.1(ii)(a): SURFACE/GROUND WATER MONITORING - (1 table per discharge point upstream and downstream locations)
 (Secondary Discharge Point)

Discharge Point Code: SW02 Carrig

MONITORING POINT CODE: SW02 Carrig1

Parameter	Results (mg/l ^{Note 1})				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	July 4	Aug 8	Sept 5	Oct 24			
2007							
pH	NA	NA	NA	NA	NA	2	Electrochemical
Temperature	NA	NA	NA	NA	NA	N/A	N/A
Electrical Conductivity (@25°C)	NA	NA	NA	NA	NA	0.5 µmhos/cm	Electrochemical
Suspended Solids	NA	NA	NA	NA	NA	0.5 mg/L	Gravimetric
Ammonia (as N)	NA	NA	NA	NA	NA	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	NA	NA	NA	NA	NA	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	NA	NA	NA	NA	NA	8 mg/L	Digestion + Colorimetric
Dissolved Oxygen	NA	NA	NA	NA	NA	N/A	N/A
Hardness (as CaCO ₃)	NA	NA	NA	NA	NA	N/A	N/A
Total Nitrogen (as N)	NA	NA	NA	NA	NA	0.5 mg/L	Digestion + Colorimetric
Nitrite (as N)	NA	NA	NA	NA	NA	N/A	N/A
Nitrate (as N)	NA	NA	NA	NA	NA	N/A	N/A
Total Phosphorus (as P)	NA	NA	NA	NA	NA	0.5 mg/L	Colorimetric
Orthophosphate (as P) - unfiltered	NA	NA	NA	NA	NA	0.2 mg/L	Digestion + Colorimetric
Sulphate (SO ₄)	NA	NA	NA	NA	NA	0.02 mg/L	Colorimetric
Phenols (sum) ^{Note 2} (µg/l)	NA	NA	NA	NA	NA	30 mg/L	Turbidimetric
	NA	NA	NA	NA	NA	0.1 µg/L	GC-MS 2

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

**TABLE F.1(ii)(b): SURFACE/GROUND WATER MONITORING - (1 table per discharge point upstream and downstream locations)
(Secondary Discharge Point)**

Discharge Point Code: SW02 Carrig

MONITORING POINT CODE: SW02 Carrig

Parameter	Results (µg/l)				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	July 4	Aug 8	Sept 5	Oct 24			
2007							
Atrazine	NA	NA	NA	NA	NA	0.96 µg/L	HPLC
Dichloromethane	NA	NA	NA	NA	NA	1 µg/L	GC-MS 1
Simazine	NA	NA	NA	NA	NA	0.01 µg/L	HPLC
Toluene	NA	NA	NA	NA	NA	0.02 µg/L	GC-MS 1
Tributyltin	NA	NA	NA	NA	NA	0.02 µg/L as Sn	GC-MS 1
Xylenes	NA	NA	NA	NA	NA	1 µg/L	GC-MS 1
Arsenic	NA	NA	NA	NA	NA	0.96 µg/L	ICP-MS
Chromium	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Copper	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Cyanide	NA	NA	NA	NA	NA	5 µg/L	Colorimetric
Fluoride	NA	NA	NA	NA	NA	100 µg/L	ISE
Lead	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Nickel	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Zinc	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Boron	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Cadmium	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Mercury	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Selenium	NA	NA	NA	NA	NA	0.2 µg/L	ICP-MS
Barium	NA	NA	NA	NA	NA	0.74 µg/L	ICP-MS
						20 µg/L	ICP-OES

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**TABLE F.1(ii)(a): SURFACE/GROUND WATER MONITORING - (1 table per discharge point upstream and downstream locations)
(Secondary Discharge Point)**

Discharge Point Code: SW03 Carrig

MONITORING POINT CODE: SW03 Carrig

Parameter	Results (mg/l) ^{Note 1}				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	July 4	Aug 8	Sept 5	Oct 24			
2007	NA	NA	NA	NA	NA	2	Electrochemical
pH	NA	NA	NA	NA	NA	N/A	N/A
Temperature	NA	NA	NA	NA	NA	0.5 µmhos/cm	Electrochemical
Electrical Conductivity (@25°C)	NA	NA	NA	NA	NA		
Suspended Solids	NA	NA	NA	NA	NA	0.5 mg/L	Gravimetric
Ammonia (as N)	NA	NA	NA	NA	NA	0.02 mg/L	Colorimetric
Biochemical Oxygen Demand	NA	NA	NA	NA	NA	0.06 mg/L	Electrochemical
Chemical Oxygen Demand	NA	NA	NA	NA	NA	8 mg/L	Digestion + Colorimetric
Dissolved Oxygen	NA	NA	NA	NA	NA	N/A	N/A
Hardness (as CaCO ₃)	NA	NA	NA	NA	NA	N/A	N/A
Total Nitrogen (as N)	NA	NA	NA	NA	NA	0.5 mg/L	Digestion + Colorimetric
Nitrite (as N)	NA	NA	NA	NA	NA	N/A	N/A
Nitrate (as N)	NA	NA	NA	NA	NA	0.5 mg/L	Digestion + Colorimetric
Total Phosphorus (as P)	NA	NA	NA	NA	NA	N/A	N/A
Orthophosphate (as P) - unfiltered	NA	NA	NA	NA	NA	0.5 mg/L	Colorimetric
Sulphate (SO ₄)	NA	NA	NA	NA	NA	0.2 mg/L	Digestion + Colorimetric
Phenols (sum) ^{Note 2} (µg/l)	NA	NA	NA	NA	NA	0.02 mg/L	Colorimetric
	NA	NA	NA	NA	NA	30 mg/L	Turbidimetric
	NA	NA	NA	NA	NA	0.1 µg/L	GC-MS 2

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

**TABLE F.1(ii)(b): SURFACE/GROUND WATER MONITORING - (1 table per discharge point upstream and downstream locations)
(Secondary Discharge Point)**

Discharge Point Code: SW03 Carrig

MONITORING POINT CODE: SW03 Carrig

Parameter	Results (µg/l)				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	July 4	Aug 8	Sept 5	Oct 24			
2007							
Atrazine	NA	NA	NA	NA	NA	0.96 µg/L	HPLC
Dichloromethane	NA	NA	NA	NA	NA	1 µg/L	GC-MS 1
Simazine	NA	NA	NA	NA	NA	0.01 µg/L	HPLC
Toluene	NA	NA	NA	NA	NA	0.02 µg/L	GC-MS 1
Tributyltin	NA	NA	NA	NA	NA	0.02 µg/L as Sn	GC-MS 1
Xylenes	NA	NA	NA	NA	NA	1 µg/L	GC-MS 1
Arsenic	NA	NA	NA	NA	NA	0.96 µg/L	ICP-MS
Chromium	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Copper	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Cyanide	NA	NA	NA	NA	NA	5 µg/L	ICP-OES
Fluoride	NA	NA	NA	NA	NA	100 µg/L	Colorimetric
Lead	NA	NA	NA	NA	NA	20 µg/L	ISE
Nickel	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Zinc	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Boron	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Cadmium	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Mercury	NA	NA	NA	NA	NA	20 µg/L	ICP-OES
Selenium	NA	NA	NA	NA	NA	0.2 µg/L	ICP-MS
Barium	NA	NA	NA	NA	NA	0.74 µg/L	ICP-MS
						20 µg/L	ICP-OES

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Cork County Council

Wastewater Discharge Licence Application under S.I. 684 of 2007 Regulations

Not Applicable

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SECTION G: PROGRAMMES OF IMPROVEMENTS

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

G.1 Compliance with Council Directives

Provide details on a programme of improvements to ensure that emissions from the agglomeration or any premises, plant, methods, processes, operating procedures or other factors which affect such emissions will comply with, or will not result in the contravention of; the Dangerous Substances Directive 2006/11/EC, the Water Framework Directive 2000/60/EC, the Birds Directive 79/409/EEC, the Groundwater Directives 80/68/EEC & 2006/118/EC, the Drinking Water Directives 80/778/EEC, the Urban Waste Water Treatment Directive 91/271/EEC, the Habitats Directive 92/43/EEC, the Environmental Liabilities Directive 2004/35/EC and the Bathing Water Directive 76/160/EEC.

Attachment G.1 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	x	

G.2 Compliance with Water Quality Standards for Phosphorus Regulations (S.I. No. 258 of 1998).

Provide details on a programme of improvements, including any water quality management plans or catchment management plans in place, to ensure that improvements of water quality required under the Water Quality Standards for Phosphorous Regulations (S.I. No. 258 of 1998) are being achieved. Provide details of any specific measures adopted for waste water works specified in Phosphorus Measures Implementation reports and the progress to date of those measures. Provide details highlighting any waste water works that have been identified as the principal sources of pollution under the P regulations.

Attachment G.2 should contain the most recent programme of improvements and any associated documentation requested under Section G.3 of the application.

Attachment included	Yes	No
		x

G.3 Impact Mitigation

Provide details on a programme of improvements to ensure that discharges from the agglomeration will not result in significant environmental pollution.

Attachment G.3 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	x	

G.4 Storm Water Overflow

Provide details on a programme of improvements to ensure that discharges other than the primary and secondary discharges comply with the definition of 'storm water overflow' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007.

Attachment G.4 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
		x

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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 <u>includes nutrient removal</u> . 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	No interim mitigation measures are proposed	Will be addressed in the Preliminary Report
3	Cobh	As for Crosshaven			
4	Carrigaline	As for Crosshaven			
5	Ringaskiddy	As for Crosshaven		As for Crosshaven As for Crosshaven As for Crosshaven	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.	No interim proposals	EIS to ABP March '08
Attachment included 1/ Assessment of Needs 2/ Water Services Investment programme 2007-2009					
				Yes	No
				Yes	Yes

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
Ballyourney/ Ballymakeery Sewerage Scheme	S	3,049,000		Shannagary/ 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		Rathormac 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 (Barry's Rd Foul and Storm Drainage) (G)	S 1,164,000
Garretstown Sewerage Scheme	S	2,153,000		Belgooley, Water Supply Scheme (incl. Sewerage)	W/S 2,913,000
Inniscarra Water Treatment Plant Extension Phase 1	W	2,678,000		Blarney Water Supply Scheme (Ext. to Station Rd) (G)	W 416,000
Little Island Sewerage Scheme (G)	S	2,200,000		Carrigtwohill Sewerage Scheme (Treatment and Storm Drain) (G)	S 7,632,000
Cork West				Castlemartyr 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				Kerypike Sewerage Scheme	S 832,000
Cork North				Kerypike 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	Carrigrohilly 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, Ballincellig & 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	Macroom Sewerage Scheme	S	5,150,000
			Minane Bridge Water Supply Scheme	W	1,421,000
Cork West					
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
			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			South Western River Basin District (WFD) Project¹		9,400,000
Ballylicky Sewerage Scheme	S	2,153,000			
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

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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

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: 14th Dec 07
(on behalf of the organisation)

Print signature name: PATRICIA POWER

Position in organisation: Director of Services

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Carrigtwohill: 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,	B1	✓
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,	B7	✓
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the waste water treatment plant and/or the waste water discharge point or points to which the application relates,	B2	✓
(d)	state the population equivalent of the agglomeration to which the application relates,	B9	✓
(e)	specify the content and extent of the waste water discharge, the level of treatment provided, if any, and the flow and type of discharge,	C,D	✓
(f)	give details of the receiving water body, including its protected area status, if any, and details of any sensitive areas or protected areas or both in the vicinity of the discharge point or points likely to be affected by the discharge concerned, and for discharges to ground provide details of groundwater protection schemes in place for the receiving water body and all associated hydrogeological and geological assessments related to the receiving water environment in the vicinity of the discharge.	D2	✓

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,	E3	✓
(h)	in the case of an existing waste water treatment plant, specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application,	E4	✓
(i)	describe the existing or proposed measures, including emergency procedures, to prevent unintended waste water discharges and to minimise the impact on the environment of any such discharges,	G	✓
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,	Not applicable	✓
(k)	give details, and an assessment of the effects, of any existing or proposed emissions on the environment, including any environmental medium other than those into which the emissions are, or are to be made, and of proposed measures to prevent or eliminate or, where that is not practicable, to limit any pollution caused in such discharges,	F1	✓
(l)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,	G	✓
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.	G3	✓
(n)	Any other information as may be stipulated by the Agency.	x	x

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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,	B8	✓
(b) where appropriate, a copy of the notice given to a relevant water services authority under Regulation 13,	Not applicable	✓
(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	B5	✓
(ii) the point or points at which monitoring and sampling are undertaken or are to be undertaken,	E3	✓
(d) such fee as is appropriate having regard to the provisions of Regulations 38 and 39.	B9(ii)	✓
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.		✓
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.		✓

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